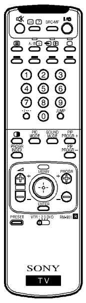
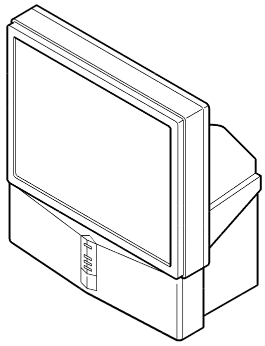
Self Diagnosis
Supported model

SERVICE MANUAL RG-3 CHASSIS

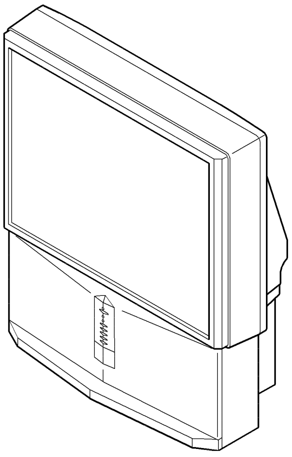
MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KP-ES43HK1	RM-961	HK	SCC-P45B-A	KP-ES53HK1	RM-961	HK	SCC-P45C-A
KP-ES43ME1	RM-961	ME	SCC-P46B-A	KP-ES53ME1	RM-961	ME	SCC-P46C-A
KP-ES43MN1	RM-961	GE	SCC-P44D-A	KP-ES53MN1	RM-961	GE	SCC-P44B-A
KP-ES43SN1	RM-961	AUS	SCC-P47B-A	KP-ES53SN1	RM-961	AUS	SCC-P47C-A
KP-ES48HK1	RM-961	HK	SCC-P45A-A	KP-ES61HK1	RM-961	HK	SCC-P45D-A
KP-ES48ME1	RM-961	ME	SCC-P46A-A	KP-ES61ME1	RM-961	ME	SCC-P46D-A
KP-ES48MN1	RM-961	GE	SCC-P44A-A	KP-ES61MN1	RM-961	GE	SCC-P44C-A
KP-ES48SN1	RM-961	AUS	SCC-P47A-A	KP-ES61SN1	RM-961	AUS	SCC-P47D-A



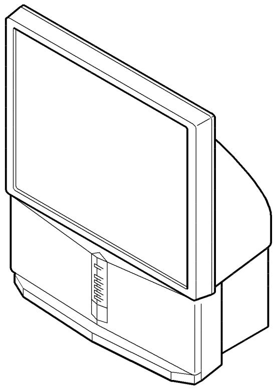
RM-961



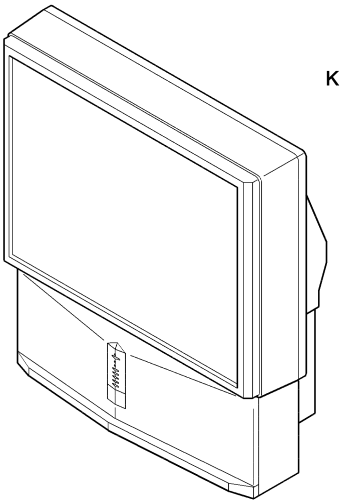
KP-ES43HK1/ME1/MN1/SN1



KP-ES53HK1/ME1/MN1/SN1



KP-ES48HK1/ME1/MN1/SN1



KP-ES61HK1/ME1/MN1/SN1

PROJECTION TV

SONY®

∗ Please file according to model size. ...▨

[✓ 43] 48 53 61

SPECIFICATIONS

	KP-ES61MN1/ KP-ES61HK1/ KP-ES61ME1/ KP-ES61SN1	KP-ES53MN1/ KP-ES53HK1/ KP-ES53ME1/ KP-ES53SN1	KP-ES48MN1/ KP-ES48HK1/ KP-ES48ME1/ KP-ES48SN1	KP-ES43MN1/ KP-ES43HK1/ KP-ES43ME1/ KP-ES43SN1
Projection system	3 picture tubes, 3 lenses, horizontal inline system			
Picture tube	7 inch high-brightnes monochorome tubes (6.3 raster size), with optical coupling and liquidcooling system			
Projection lenses	High performance, large-diameter highbrid lens F1.0			
Screen size	61 inches	53 inches	48 inches	43 inches
Television system	B/G, I, D/K, M			
Color system	PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58			
Stereo/Bilingual system	NICAM Stereo/Bilingual B/G, I; A2 Stereo/Bilingual (German) B/G			
Channel coverage				
B/G	VHF : E2 to E12 / UHF : E21 to E69 / CATV : S01 to S03, S1 to S41			
I	UHF : B21 to B68 / CATV : S01 to S03, S1 to S41			
D/K	VHF : C1 to C12, R1 to R12 / UHF : C13 to C57, R21 to R60 / CATV : S01 to S03, S1 to S41, Z1 to Z39			
M	VHF : A2 to A13 / UHF : A14 to A79/ CATV : A-8 to A-2, A to W+4, W+6 to W+84			
⊤⊤(Antenna)	75-ohm external terminal			
Audio output (Speaker)	13W + 13W, (10% distortion)			
Number of terminal				
⊛ (Video)	Input: 4 Output: 1 Phono jacks; 1 Vp-p, 75 ohms			
♪ (Audio)	Input: 4 Output: 1 Phono jacks; 500 mVrms			
⇥ (S Video)	Input: 2 Y: 1 Vp-p, 75 ohms, unbalanced, sync negative C: 0.286 Vp-p, 75 ohms			
⇥ (Component Video)	Input: 1 Phono jacks Y: 1 Vp-p, 75 ohms, sync negative C_B/B-Y: 0.7 Vp-p, 75 ohms C_R/R-Y: 0.7 Vp-p, 75 ohms Audio: 500 mVrms			
⊖→	Output: 1 Phono jack; 500 mVrms			
∩ (Headphones)	Output: 1 Stereo minijack			
Dimensions (w/h/d, mm)	1372 × 1542 × 661.5	1218 × 1423 × 623	1091 × 1336 × 580	966 × 1078 × 532
Mass (kg)	90	76	68	61

Power requirements 110 V – 240 V (For KP-ES61MN1/KP-ES53MN1/KP-ES48MN1/KP-ES43MN1/KP-ES61ME1/KP-ES53ME1/KP-ES48ME1/KP-ES43ME1)
220 V – 240 V (For KP-ES61HK1/KP-ES53HK1/KP-ES48HK1/KP-ES43HK1/KP-ES61SN1/KP-ES53SN1/KP-ES48SN1/KP-ES43SN1)

Power consumption (W) 270 W (For KP-ES61MN1/KP-ES53MN1/KP-ES48MN1/KP-ES43MN1/KP-ES61ME1/KP-ES53ME1/KP-ES48ME1/KP-ES43ME1)
255 W (For KP-ES61HK1/KP-ES53HK1/KP-ES48HK1/KP-ES43HK1/KP-ES61SN1/KP-ES53SN1/KP-ES48SN1/KP-ES43SN1)

Design and specifications are subject to change without notice.

CAUTION

SHORT CIRCUIT THE ANODE OF HTE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SECTION 1

SELF DIAGNOSIS FUNCTION

The unit in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER lamp will automatically begin to flash.

The number of times the lamp flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER lamp flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the remote commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

1-1. DIAGNOSTIC TEST INDICATORS

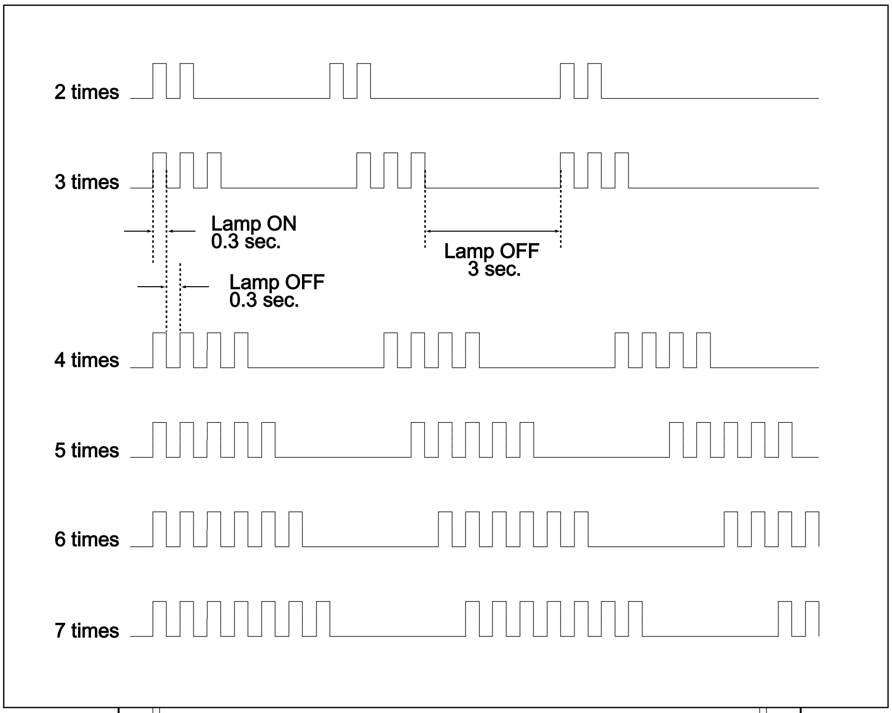
When an errors occurs, the STANDBY/TIMER lamp will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

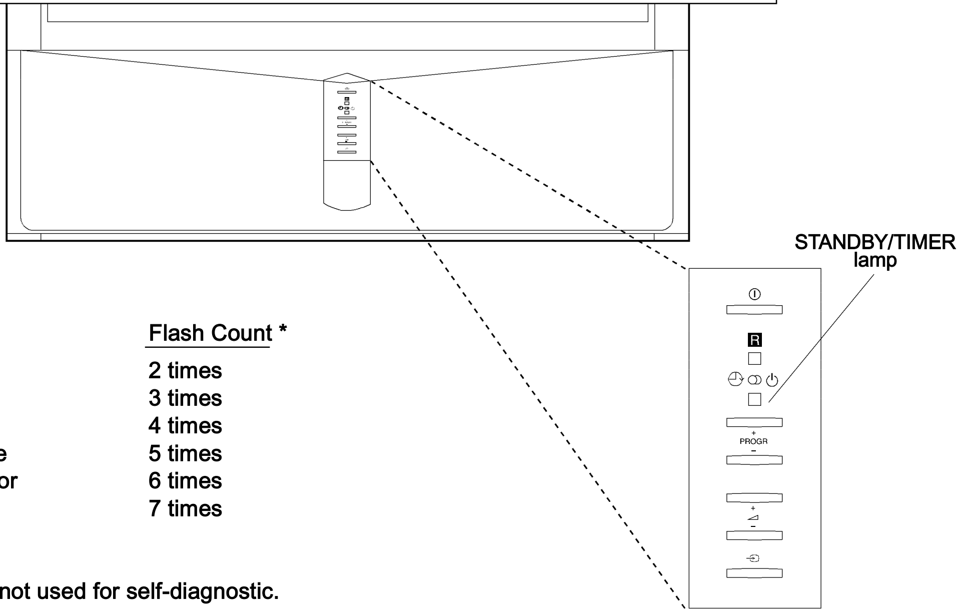
Result for all of the following diagnostic items are displayed on screen. No error has occurred if the screen displays a “0”.

Diagnostic Item Description	No. of times STANDBY/TIMER lamp flashes	Self-diagnostic display/ Diagnostic result	Probable Cause Location	Detected Symptoms
• Power does not turn on	Does not light	—	• Power cord is not plugged in. • Fuse (F6001) is burned out. (G, G1 board)	• Power does not come on. • No power is supplied to the PJ. • AC power supply is faulty.
• +B overcurrent (OCP)	2 times	002:000 or 002:001 ~ 255	• H. OUT Q5104 is shorted. • H. LIN Q5105 is shorted. (D board)	• Power does not come on. • Load on power line is shorted.
• +B overvoltage (OVP)	3 times	003:000 or 003:001 ~ 255	• IC6002 faulty. • 10.5 V is not supplied. (G, G1 board)	• Power does not come on.
• Vertical deflection failure	4 times	004:000 or 004:001 ~ 255	• V. OUT IC5302 faulty. • R5340 open • R5341 open (D board)	• Vertical deflection pulse is stopped. • Vertical size is too small. • Vertical deflection stopped.
• White balance failure (no PICTURE)	5 times	005:000 or 005:001 ~ 255	• G2 is improperly adjusted. (Note 1) • CRT problem. • Video OUT IC7101 (CR board), IC7201 (CG board), IC7301 (CB board) are faulty. • IC8306 (J1 board) and IC4301 (E board) are faulty. • No connection E board to CR board.	• No raster is generated. • CRT cathode current detection reference pulse output is small.
• High Voltage failure	6 times	006:000 or 006:001 ~ 255	• IC6301 (G, G1 bard) faulty.	• +135 V is too high.
• Audio Protection	7 times	007:000 or 007:001 ~ 255	• Power supply fails. • IC1101 (A1 board) faulty.	• There is picture but speaker does not release sound.
• Micro reset	—	101:000 or 101:001 ~ 255	•Discharge CRT (CR, CG, CB boards) • Static discharge • External noise	• Power is shut down shortly, after this return back to normal. • Detect Micro latch up.

Note 1 : Refer to screen (G2) adjustment in section 4-2 of this manual.

1-2. DISPLAY OF STANDBY/TIMER LIGHT FLASH COUNT


2 times
3 times
Lamp ON
0.3 sec.
Lamp OFF
3 sec.
Lamp OFF
0.3 sec.
4 times
5 times
6 times
7 times


STANDBY/TIMER
lamp
R
PROGR

Diagnostic Item	Flash Count *
+B overcurrent	2 times
+B overvoltage	3 times
V deflection stop	4 times
White balance failure	5 times
High voltage protector	6 times
Audio Protection	7 times

* One flash count is not used for self-diagnostic.

1-3. STOPPING THE STANDBY/TIMER FLASH

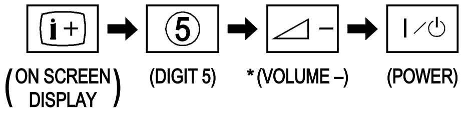
Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER lamp from flashing.

1-4. SELF-DIAGNOSTIC SCREEN DISPLAY

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurrences of failure for confirmation on the screen:

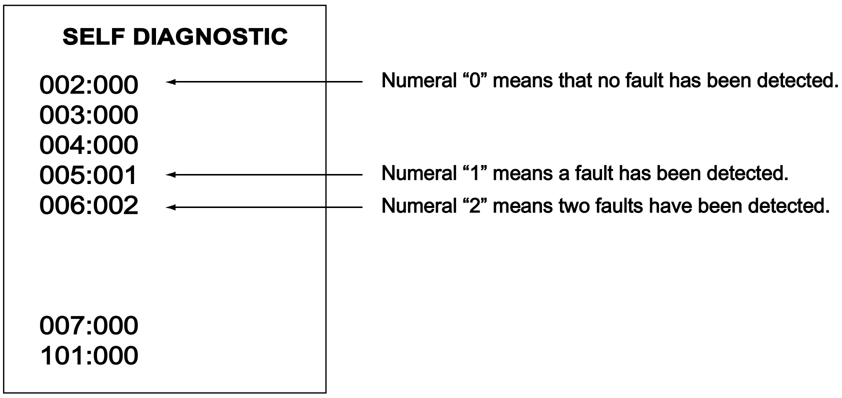
[To Bring Up Screen Test]

In standby mode, press buttons on the remote commander sequentially in rapid succession as shown below:



* : Note that this differs from entering the service mode (volume +)

Self-Diagnosis screen display



SELF DIAGNOSTIC

002:000
003:000
004:000
005:001
006:002

007:000
101:000

Numeral “0” means that no fault has been detected.

Numeral “1” means a fault has been detected.

Numeral “2” means two faults have been detected.

1-5. HANDLING OF SELF-DIAGNOSTIC SCREEN DISPLAY

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.

Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

[Clearing the result display]

To clear the result display to “0”, press button on the remote commander sequentially as shown below when the diagnostic screen is being displayed.

Press “⑧” button
(It will indicate “CLEAR” on the screen.)

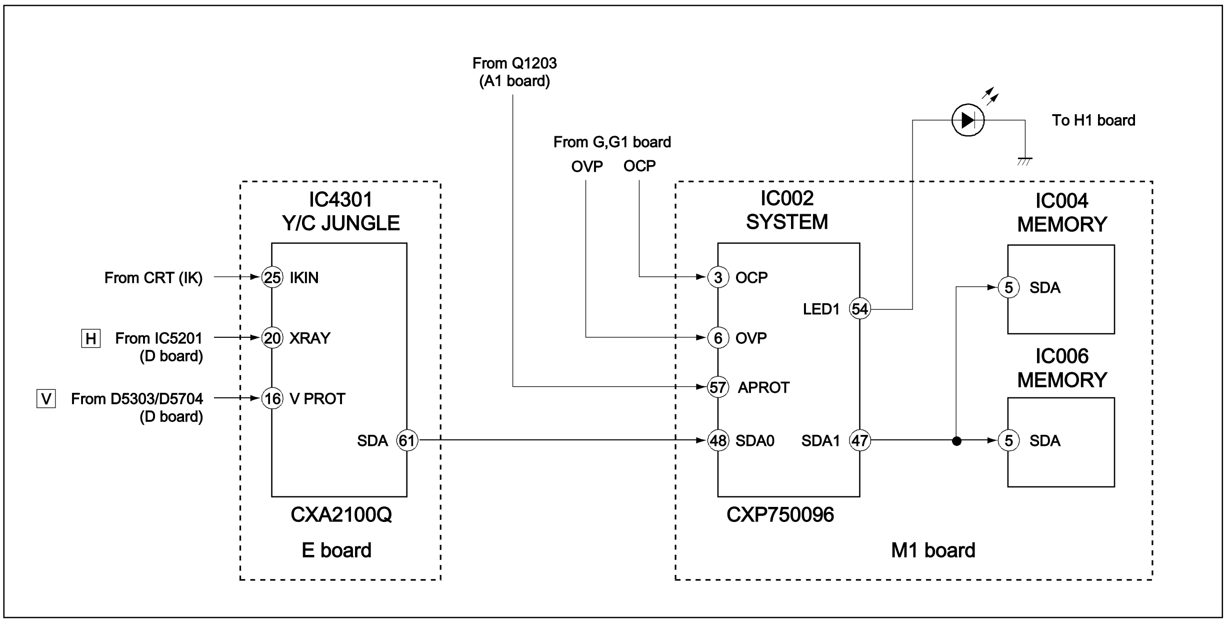
➡

Press “⓪” button
(The “CLEAR” display change to red color.)

[Quitting Self-diagnostic screen]

To quit the entire self-diagnostic screen, turn off the power switch on the remote commander or the main unit.

1-6. SELF-DIAGNOSTIC CIRCUIT


From Q1203
(A1 board)
To H1 board
From G,G1 board
OVP OCP
IC4301
Y/C JUNGLE
IC002
SYSTEM
IC004
MEMORY
From CRT (IK)
25 IKIN
3 OCP
LED1 54
5 SDA
H From IC5201
(D board)
20 XRAY
6 OVP
IC006
MEMORY
V From D5303/D5704
(D board)
16 V PROT
57 APROT
SDA 61
48 SDA0
SDA1 47
5 SDA
CXA2100Q
E board
CXP750096
M1 board

+B overcurrent (OCP)	Occurs when an overcurrent on the +B (135 V) line is detected by Q6303. If Q6303 go to ON, the voltage to pin 3 of IC002 go to UP. The unit will automatically turn off.
+B overvoltage (OVP)	Occurs when an overvoltage on the +B (135 V) line is detected by D6318. If D6318 go to ON, then voltage to pin 6 of IC002 go to UP. The unit will automatically turn off.
Vertical deflection failure	Occurs when an absence of the vertical deflection pulse is detected by Q5302, Q5303, and D5303. Shut down the power supply.
White balance failure	If the RGB levels do not balance or become low level within 5 seconds. This error will be detected by IC4301. TV will stay on, but there will be no picture.
High voltage protector of Horizontal Deflection	Occurs when an overvoltage of horizontal pulse is detected by D5115 and IC5201. If the voltage of pin 1 of IC5201 goes to High, the voltage to pin 20 of IC4301 go to UP. The unit will automatically turn off.
Audio Protector	If the Audio out lines become DC.This error will be detected by Q1202, Q1204 and Q1203. The unit will automatically turn off.

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

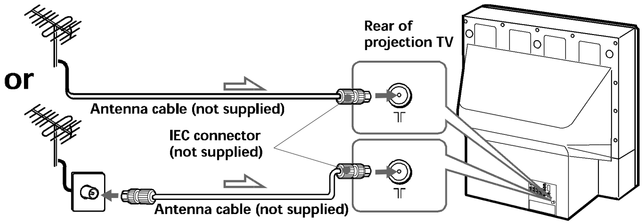
SECTION 2
GENERAL

Getting Started

Step 1

Connect the antenna

If you wish to connect a VCR, see the “Connecting a VCR” diagram below.

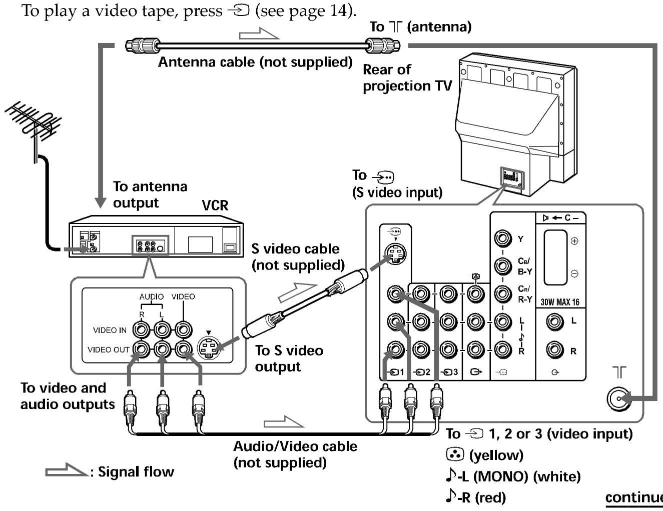

or
Rear of projection TV
Antenna cable (not supplied)
IEC connector (not supplied)
╥
╥
Antenna cable (not supplied)

⇨: Signal flow

CAUTION
Do not connect the power cord until all other connections are complete; otherwise, a minimal current leakage through the antenna and/or other terminals to the ground could occur.

Connecting a VCR

To play a video tape, press ⇥ (see page 14).


To ╥ (antenna)
Antenna cable (not supplied)
Rear of projection TV
To antenna output
VCR
To ⇥••• (S video input)
S video cable (not supplied)
AUDIO VIDEO
R L
VIDEO IN
VIDEO OUT
To S video output
To video and audio outputs
Y
CB/B-Y
CR/R-Y
30W MAX 16
L
R
⇥1 ⇥2 ⇥3
╥
Audio/Video cable (not supplied)
To ⇥ 1, 2 or 3 (video input)
⦿ (yellow)
♪-L (MONO) (white)
♪-R (red)
⇨: Signal flow

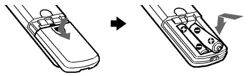
continued

Getting Started (continued)

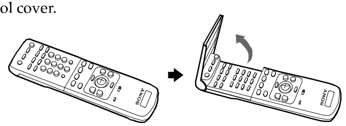
Notes
- If you connect a monaural VCR, connect the yellow plug to ⦿ (the yellow jack) and the black plug to ♪-L (MONO) (the white jack).
- If you connect a VCR to the ╥ (antenna) terminal, preset the signal output from the VCR to the program number 0 on the projection TV.
- When both the ⇥••• (S video input) and ⇥ 1 (video input) are connected, the ⇥••• (S video input) is automatically selected. To view the video input to ⇥ 1 (video input), disconnect the S video cable.

Step 2

Insert the batteries into the remote

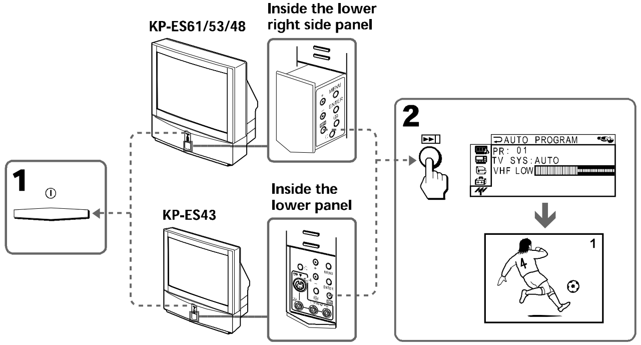


Notes
- Do not use old batteries or different types of batteries together.
- To operate some of the functions of your projection TV, you may have to open the remote control cover.



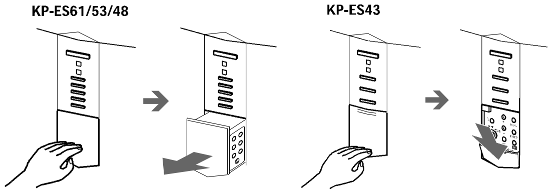
Step 3

Preset the channels automatically


KP-ES61/53/48
Inside the lower right side panel
KP-ES43
Inside the lower panel
1
2
AUTO PROGRAM
PR: 01
TV SYS:AUTO
VHF LOW
1

Notes

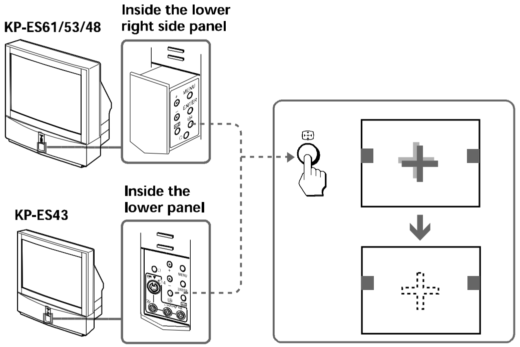
- To stop the automatic channel presetting, press MENU twice.
- If your projection TV has preset an unwanted channel or cannot preset a particular channel, then preset your projection TV manually (see page 44).
- To open the lower panel of your projection TV, push on it, then it will open.


KP-ES61/53/48

KP-ES43

Step 4

Adjusting the convergence automatically


KP-ES61/53/48
Inside the lower right side panel
KP-ES43
Inside the lower panel

Note

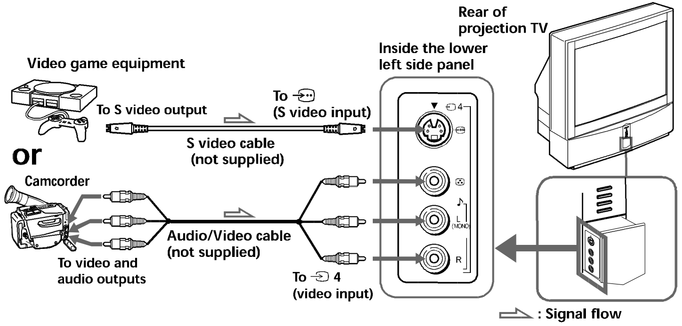
- Adjust convergence about 20 – 30 minutes after the projection TV is first turned on.

  The Digital Quick Focus feature allows you to adjust the convergence automatically.

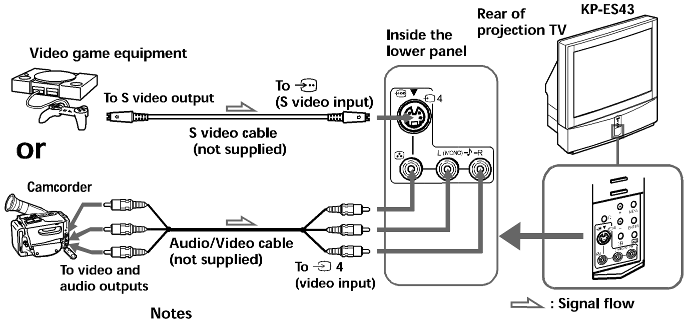
Connecting optional components

You can connect optional audio/video components, such as a VCR, multi disc player, camcorder, video game, or stereo system. To watch and operate the connected equipment, see pages 14 and 28.

Connecting a camcorder/video game equipment using the ⊕ (video input) jacks


KP-ES61/53/48

Rear of projection TV
Inside the lower left side panel
Video game equipment
To S video output
To ⊞ (S video input)
S video cable (not supplied)
or
Camcorder
Audio/Video cable (not supplied)
To video and audio outputs
To ⊕ 4 (video input)
⇨ : Signal flow

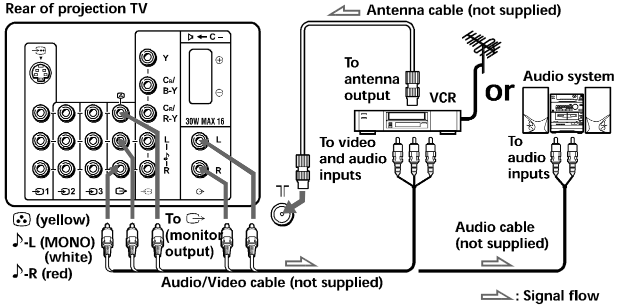

KP-ES43

Rear of projection TV
Inside the lower panel
Video game equipment
To S video output
To ⊞ (S video input)
S video cable (not supplied)
or
Camcorder
Audio/Video cable (not supplied)
To video and audio outputs
To ⊕ 4 (video input)
⇨ : Signal flow

Notes

- When connecting video game equipment, display the "FEATURE" menu and select "ON" for "GAME MODE" to adjust the picture setting that is suitable for video games (see page 39).
- You can also connect video equipment to the ⊕ 1, 2, or 3 (video input) jacks at the rear of your projection TV.
- When both the ⊞ (S video input) and ⊕ 4 (video input) are connected, the ⊞ (S video input) is automatically selected. To view the video input to ⊕ 4 (video input), disconnect the S video cable.

Connecting audio/video equipment using the ⇨ (monitor output) jacks


Rear of projection TV
Y
C_B/ B-Y
C_R/ R-Y
L
R
30W MAX 16
1
2
3
Antenna cable (not supplied)
To antenna output
VCR
or
Audio system
To video and audio inputs
To audio inputs
(yellow)
♪-L (MONO) (white)
♪-R (red)
To ⇨ (monitor output)
Audio cable (not supplied)
Audio/Video cable (not supplied)
: Signal flow

Notes

- If you select “DVD” on your TV screen, no signal will be output at the ⇨ (monitor output) jacks (see page 14).
- When connecting the audio cable to the ⇨, you can adjust the volume with ◿ +/–.

continued

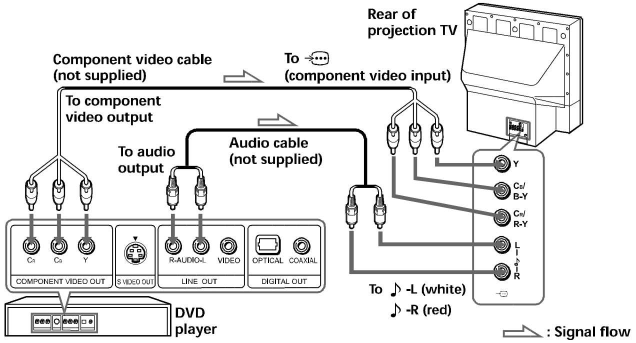
Connecting optional components (continued)

Connecting a DVD player to ⇥ (component video input)

1 Using an audio cable, connect R and L under ⇥ (component video input) on your projection TV to the LINE OUT, AUDIO R and L output connectors on your DVD player.

2 Using a component video cable, connect Y, C_B/B-Y, and C_R/R-Y under ⇥ (component video input) on your projection TV to the COMPONENT VIDEO OUT Y, C_B, and C_R output connectors on your DVD player.

3 Press ⇥ on the remote or the projection TV until “DVD” appears on the screen.


Rear of projection TV
Component video cable (not supplied)
To ⇥ (component video input)
To component video output
To audio output
Audio cable (not supplied)
Y
C_B/ B-Y
C_R/ R-Y
L
R
C_R
C_B
Y
COMPONENT VIDEO OUT
S VIDEO OUT
R-AUDIO-L
VIDEO
LINE OUT
OPTICAL
COAXIAL
DIGITAL OUT
DVD player
To ♪ -L (white)
♪ -R (red)
: Signal flow

Notes

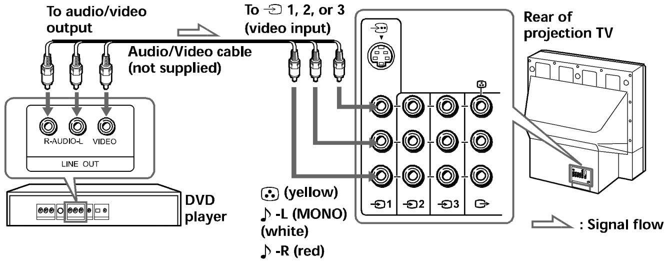
- Some DVD player terminals may be labeled differently:

Connect	To (on the DVD player)
Y (green)	Y
C_B/B-Y (blue)	C_b, B-Y or P_B
C_R/R-Y (red)	C_r, R-Y or P_R

- When connecting to ⇥ (component video input) on your projection TV, you must connect Y, C_B, and C_R to receive the video signals, and at least connect L and R to receive analog audio signals.

Connecting a DVD player to ⇥ (video input)

Connect ⇥ 1, 2, or 3 (video input) ♪/⊙ (audio/video) connectors on your projection TV to LINE OUT on your DVD player.

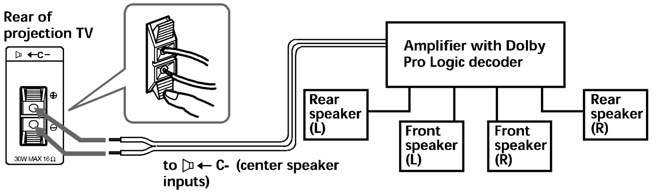

To audio/video output
To ⇥ 1, 2, or 3 (video input)
Audio/Video cable (not supplied)
Rear of projection TV
R-AUDIO-L
VIDEO
LINE OUT
DVD player
⊙ (yellow)
♪ -L (MONO) (white)
♪ -R (red)
⇥1
⇥2
⇥3
: Signal flow

Notes

- Since the high quality pictures on a DVD disc contain a lot of information, picture noise may appear. In this case, adjust the sharpness ("SHARP") under "PERSONAL ADJUST" in the "PICTURE MODE" menu (see page 34).
- Connect your DVD player directly to your projection TV. Connecting the DVD player through other video equipment will cause unwanted picture noise.

Connecting an amplifier with Dolby* Pro Logic decoder to ⊐← C– (center speaker input)

Connect the speaker terminals on your amplifier to ⊐← C– on your projection TV.


Rear of projection TV
⊐ ←C–
30W MAX 16Ω
to ⊐← C– (center speaker inputs)
Amplifier with Dolby Pro Logic decoder
Rear speaker (L)
Front speaker (L)
Front speaker (R)
Rear speaker (R)

Note

- When making connection to ⊐← C– on your projection TV set "SPEAKER: CENTER IN" in the "A/V CONTROL" menu. (see page 33)

---

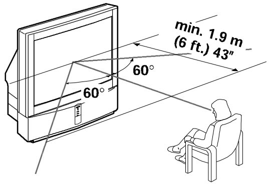
* Manufactured under license from Dolby Laboratories Licensing Corporation.
DOLBY, the double-D symbol ▯▯ and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.

Installing the projection TV

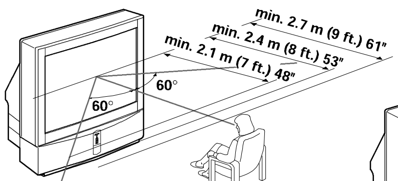
For the best picture quality, install the projection TV within the areas below.

Optimum viewing area (Horizontal)

KP-ES43

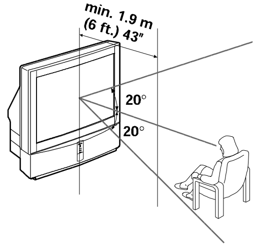

min. 1.9 m (6 ft.) 43"
60°
60°

KP-ES61/53/48

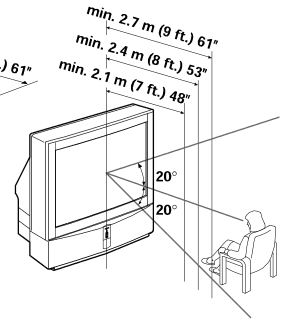

min. 2.7 m (9 ft.) 61"
min. 2.4 m (8 ft.) 53"
min. 2.1 m (7 ft.) 48"
60°
60°

Optimum viewing area (Vertical)

KP-ES43


min. 1.9 m (6 ft.) 43"
20°
20°

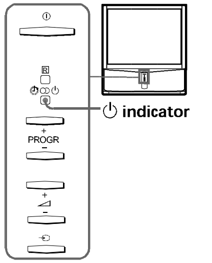
KP-ES61/53/48


min. 2.7 m (9 ft.) 61"
min. 2.4 m (8 ft.) 53"
min. 2.1 m (7 ft.) 48"
20°
20°

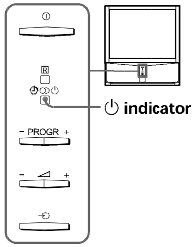
Watching the TV

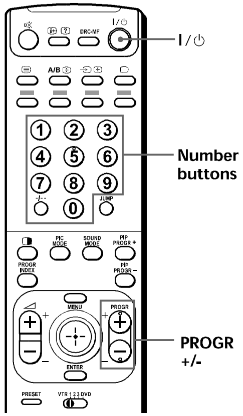
This section explains various functions and operations used while watching the TV. Most operations can be done using the remote.

KP-ES61/53/48



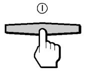
KP-ES43





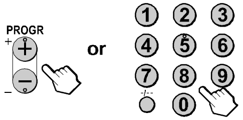
1 **Press ⏼ to turn on the projection TV.**

When the projection TV is in standby mode (the ⏻ indicator on the projection TV is lit red), press **I**/⏻ on the remote.



2 **Press PROGR +/- or the number buttons to select the TV channel.**

For double digit numbers, press -/--, then the number (e.g., for 25, press -/--, then 2 and 5).



Note

- When you turn on the projection TV, either the program number or video mode is displayed for approximately 40 seconds. The ECO MODE (ECO) icon will also appear if "ECO MODE " in the "FEATURE" menu is set "ON" (see page 39).

To select a TV program quickly

(1) Press and hold PROGR +/–.

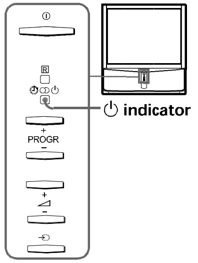
(2) Release PROGR +/– when the desired program number appears.

Note

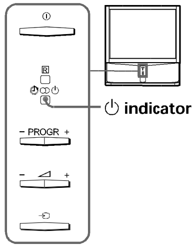
- When you select a TV program quickly, the picture may be disrupted. This does not indicate a malfunction.

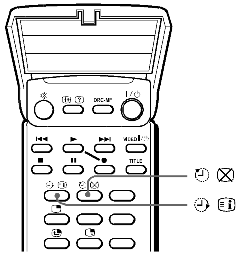
continued

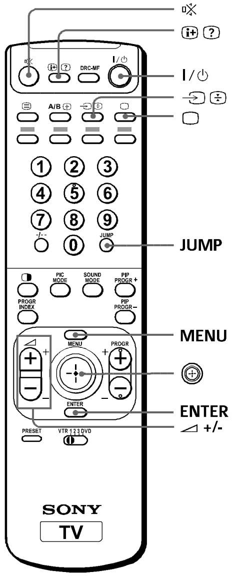
KP-ES61/53/48



KP-ES43







Additional tasks

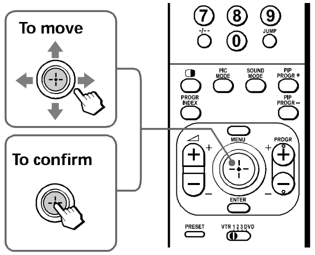
To	Press
Turn off temporarily	**I**/⏻. The ⏻ indicator on the projection TV lights up red.
Turn off completely	⏼ on the projection TV.
Adjust the volume	⊿ +/–.
Mute the sound	🔇.
Watch the video input (VCR, camcorder, etc.)	⇥ (or ⇥ on the projection TV) to select "VIDEO 1", "VIDEO 2", "VIDEO 3", "VIDEO 4" or "DVD". To return to the TV screen, press ▭ (or ⇥ on the projection TV).
Jump back to the previous channel	JUMP.
Display the on-screen information*	(i+).

* Some picture/sound settings, and either the program number or video mode are displayed. The on-screen display for the picture/sound settings disappears after about 3 seconds.

Using the Remote Control Button Joystick (⊕)

You can select the menu item on the screen by moving ⊕ up, down, left or right (see page 32).

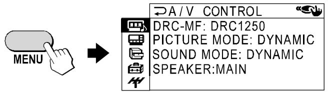
To confirm a selected item, press ⊕. You can also press ENTER on the remote to confirm a selected item.



Changing the menu language

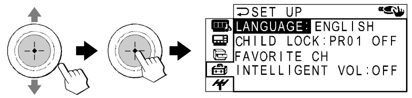
You can change the menu language as well as the on-screen language. For details on how to use the menu, see "Introducing the menu system" on page 30.

1 Press MENU.



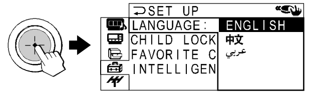
```
⊃A/V CONTROL
DRC-MF: DRC1250
PICTURE MODE: DYNAMIC
SOUND MODE: DYNAMIC
SPEAKER:MAIN
```

2 Move ⊕ up or down to select 🧰, then press ⊕.



```
⊃SET UP
LANGUAGE: ENGLISH
CHILD LOCK:PR01 OFF
FAVORITE CH
INTELLIGENT VOL:OFF
```

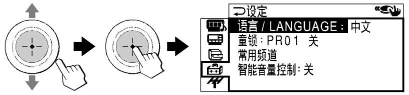
3 Make sure "LANGUAGE" is selected then press ⊕.



```
⊃SET UP
LANGUAGE:    ENGLISH
CHILD LOCK   中文
FAVORITE C   عربي
INTELLIGEN
```

4 Move ⊕ up or down to select the desired language (e.g.,"中文"), then press ⊕.

The selected menu language appears.



```
⊃设定
语言 / LANGUAGE : 中文
童锁 : PR01 关
常用频道
智能音量控制 : 关
```

To return to the normal screen

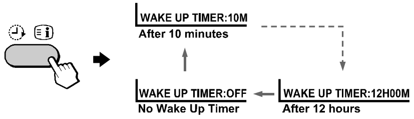
Press MENU.

continued

Setting the Wake Up timer

1 Press ⏲ until the desired period of time appears.

The Wake Up timer starts immediately after you have set it.



```
WAKE UP TIMER:10M
After 10 minutes

WAKE UP TIMER:OFF
No Wake Up Timer

WAKE UP TIMER:12H00M
After 12 hours
```

2 Select the TV channel or video mode you want to wake up to.

3 Press I/⏻, or set the Sleep timer if you want the projection TV to turn off automatically.
The ⏲ indicator on the projection TV lights up orange.

To cancel the Wake Up timer

Press ⏲ until "WAKE UP TIMER: OFF" appears, or turn the projection TV off.

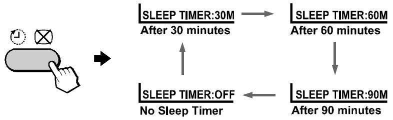
Note

- If no buttons or controls are pressed for more than two hours after the projection TV is turned on using the Wake Up timer, the projection TV automatically goes into standby mode. To resume watching the TV, press any button or control on the projection TV or the remote.

Setting the Sleep timer

Press ⏲ until the desired period of time appears.

The Sleep timer starts immediately after you have set it.

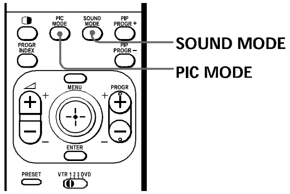


```
SLEEP TIMER:30M
After 30 minutes

SLEEP TIMER:60M
After 60 minutes

SLEEP TIMER:OFF
No Sleep Timer

SLEEP TIMER:90M
After 90 minutes
```

To cancel the Sleep timer

Press ⏲ until "SLEEP TIMER: OFF" appears, or turn the projection TV off.

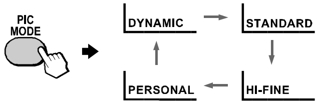
Selecting the picture and sound modes



You can select picture and sound modes and adjust the setting to your preference in the "PERSONAL" option.

Selecting the picture mode

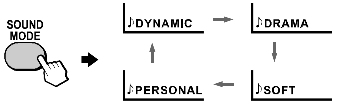
Press PIC MODE repeatedly until the desired picture mode is selected.



Select	To
"DYNAMIC"	receive high contrast pictures.
"STANDARD"	receive normal pictures.
"HI-FINE"	receive higher resolution pictures with mild contrast.
"PERSONAL"	receive the last adjusted picture setting from the "ADJUST" option in the "A/V CONTROL" menu (see page 34).

Selecting the sound mode

Press SOUND MODE repeatedly until the desired sound mode is selected.

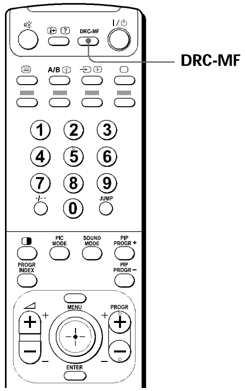


Select	To
"DYNAMIC"	listen to dynamic and clear sound that emphasizes both the low and high tones.
"DRAMA"	listen to sound that emphasizes voice and high tones.
"SOFT"	receive soft sound.
"PERSONAL"	receive the last adjusted sound setting from the "ADJUST" option in the "A/V CONTROL" menu (see page 34).

Tip
- You can also set the picture and sound modes using the menu (see "Changing the "A/V CONTROL" setting" on page 33).

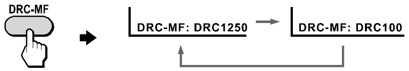
Viewing higher quality pictures

— "DRC-MF"



The Digital Reality Creation-Multi Function (DRC-MF) feature allows you to enjoy higher quality pictures on your projection TV. You can select "DRC1250" to watch super real (higher resolution) pictures, or "DRC100" to reduce flicker if necessary.

Press DRC-MF repeatedly until you receive the desired picture quality.



Select	To
"DRC1250"	select higher resolution pictures.
"DRC100"	reduce flicker on the screen.

Tip
- When the broadcast signal is weak, you may see some dots or noise on the TV screen. To reduce this interference, display the "A/V CONTROL" menu and select "ADJUST" in "PICTURE MODE", then adjust "SHARP" to reduce the sharpness (see page 34).

Note
- The DRC-MF mode is not selectable when using the "PROGRAM INDEX" or "FAVORITE CH" feature, or when the "GAME MODE", Picture-In-Picture ("PIP"), or "TWIN" mode is turned "ON".

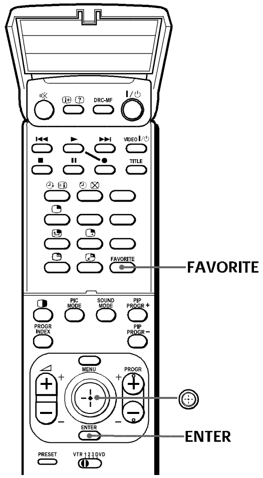
The DRC-MF logo (DRC-MF Digital Reality Creation) and "DRC-MF" are trademarks of Sony Corporation.

Viewing your favorite channels

— "FAVORITE CH"

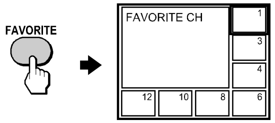
You can display seven favorite channels for quick and easy selection.

The last seven channels selected with the number buttons are displayed in "AUTO" mode. You can set up your own favorite channels in "MANUAL" mode under the "FAVORITE CH" menu (see "Changing the favorite channel setting" on page 42).

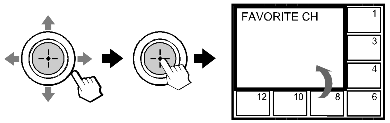


Selecting a favorite channel

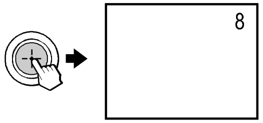
1 Press FAVORITE.



2 Move ⊕ up, down, left or right to select the desired channel (e.g. PR 8), then press ⊕.



3 Press ⊕ again.



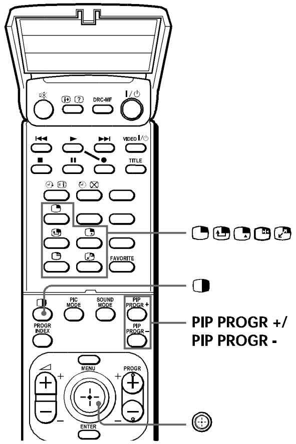
Note

- When you use your projection TV for the first time, seven preset channels appear.

Watching two programs at the same time

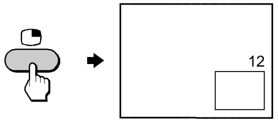
— "PIP", "TWIN"

With the Picture-in-Picture (PIP) or TWIN pictures features, you can display a different TV program or video within or beside the main picture.



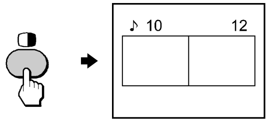
Displaying the PIP screen

Press ◳.



Displaying TWIN pictures

Press ◨.



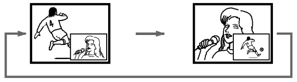
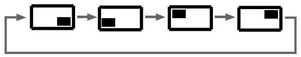
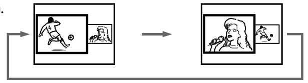
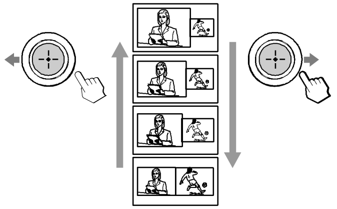
To return to the normal screen

Press ◳ (when in the PIP screen) or ◨ (when in the TWIN picture screen).

Tip

- You can also display the PIP screen or TWIN pictures using the menu (see "Changing the MULTI PICTURE setting" on page 36).

Additional PIP/TWIN pictures tasks

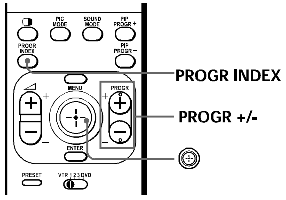
To	Press/Move
change a TV program in the PIP screen or in the right TWIN picture	Press PIP PROGR + or PIP PROGR –. For a video input, press ▣.
swap pictures between the main and PIP screens	Press ⧉. 
freeze the PIP screen	Press ▣. To unfreeze the screen, press the button again.
change the position of the PIP screen	Press ▣. 
swap the right and left pictures of the TWIN pictures	Press ⧉. 
change the screen size of the TWIN pictures	Move ⊕ left to increase the left screen size. Move ⊕ right to increase the right screen size. 

Notes

- The ▣ button does not function in the TWIN pictures mode.
- When you display a video input on the PIP screen at a faster/slower speed, the picture may be disrupted depending on the VCR type.
- If you display different color systems on the main screen and the PIP screen, the size of the PIP screen may be different and the PIP picture may be disrupted. This does not indicate a malfunction of the projection TV.
- In the TWIN picture screen, you can only operate and hear the sound of the main left screen (♪ appears on the screen).
- When the ◨ button is pressed, the TV screen flickers or goes blank for about one second before the TWIN pictures appear. This does not indicate a malfunction of the projection TV.

Displaying multiple programs

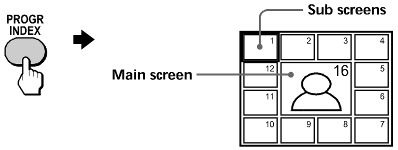
— "PROGRAM INDEX"


PIC MODE
SOUND MODE
PIP PROGR +
PROGR INDEX
PIP PROGR –
MENU
PROGR
ENTER
PRESET
VTR 1 2 3 DVD
PROGR INDEX
PROGR +/-

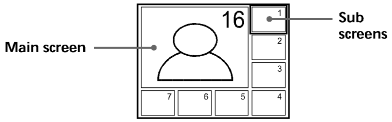
The PROGRAM INDEX feature displays all of the preset TV programs on twelve or seven sub screens for direct selection.

Press PROGR INDEX.

The first twelve preset programs appear one by one, clockwise from the upper left corner.


PROGR INDEX
Sub screens
Main screen
1
2
3
4
12
16
5
11
6
10
9
8
7

When the number of the preset TV programs is less than eight, the first seven preset programs appear one by one, clockwise from the upper right corner.


Main screen
16
1
2
3
7
6
5
4
Sub screens

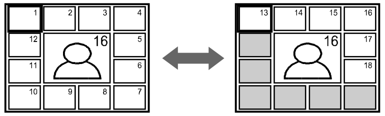
Tip

- When you press the PROGR INDEX button in the TWIN pictures mode, the left picture appears as the main screen of the PROGRAM INDEX mode.

To view the next or the previous twelve preset programs

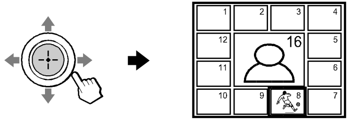
This works only when the number of the preset TV programs is more than twelve.

Press PROGR +/– on the remote or the projection TV.

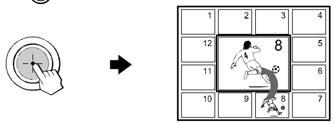

1
2
3
4
12
16
5
11
6
10
9
8
7
13
14
15
16
16
17
18

To select the desired program directly from the sub screens

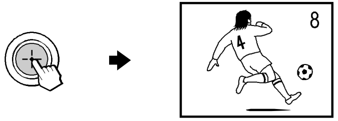
1 Move ⊕ up, down, left or right to move the frame to the screen of the program you want to watch.


1
2
3
4
12
16
5
11
6
10
9
8
7

2 Press ⊕.


1
2
3
4
12
8
5
11
6
10
9
8
7

3 Press ⊕ again.



Tip

- Pressing the number buttons directly displays the program.

To return to the normal screen

Press PROGR INDEX again, or:

1 Select “PROGRAM INDEX” from the “MULTI PICTURE” menu.
2 Press ⊕.

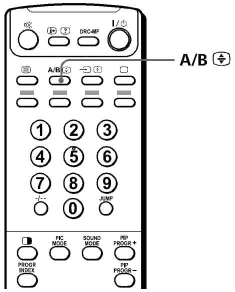
Tip

- You can also display multiple programs using the menu (see “Changing the MULTI PICTURE setting” on page 36).

Note

- When displaying multiple programs, only the sound of the main screen is heard.

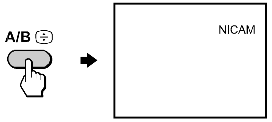
Enjoying stereo or bilingual programs


DRC-MF
I/⏻
A/B
1
2
3
4
5
6
7
8
9
0
JUMP
PIC MODE
SOUND MODE
PIP PROGR +
PROGR INDEX
PIP PROGR –
A/B ⨸

You can enjoy stereo sound or bilingual programs of NICAM and A2 (German) stereo systems.

Press A/B repeatedly until you receive the sound you want.

The on-screen display changes to show the selected sound and the ∞ indicator on the projection TV lights up red.



When receiving a NICAM program

Broadcasting	On-screen display (Selected sound)
NICAM stereo	→ NICAM (Stereo sound) → MONO (Regular sound)
NICAM bilingual	→ NICAM MAIN (Main sound) → NICAM SUB (Sub sound) → MONO (Regular sound)
NICAM monaural	→ NICAM MAIN (Main sound) → MONO (Regular sound)

When receiving an A2 (German) program

Broadcasting	On-screen display (Selected sound)
A2 (German) stereo	**MONO** (Regular sound) → **STEREO** (Stereo sound)
A2 (German) bilingual	**MAIN** (Main sound) → **SUB** (Sub sound)

Receiving area for NICAM and A2 (German) programs

System	Receiving area
NICAM	Hong Kong, Singapore, New Zealand, Malaysia, Thailand, etc.
A2 (German)	Australia, Malaysia, Thailand, etc.

Notes

- If the signal is very weak, the sound becomes monaural automatically.
- If the stereo sound is noisy when receiving a NICAM program, select "MONO". The sound becomes monaural, but the noise is reduced.
- Before receiving a NICAM stereo program in China, please check the NICAM broadcast condition at your area. When receiving a NICAM stereo program, the receiving conditions might vary depending on area. In addition, different strength of the NICAM broadcast signal might affect the receiving quality.

If the sound is distorted or noisy when receiving a monaural program through the ╖╓ (antenna) terminal

Press A/B repeatedly until "MONO" appears on the screen.

To cancel the monaural sound setting, press A/B again until "AUTO" appears on the screen.

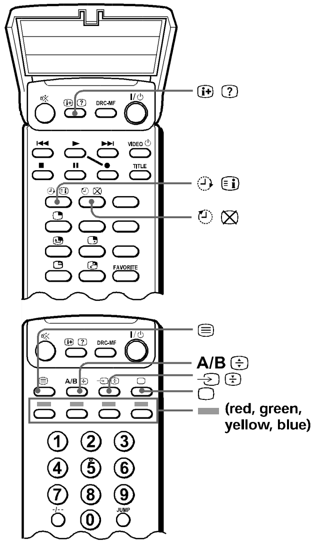
MONO → **AUTO**

Notes

- The "MONO" or "AUTO" setting is memorized for each program position.
- You cannot receive a stereo broadcast signal when the projection TV is in the "MONO" setting. Normally, set the projection TV to "AUTO".

Viewing Teletext

Some TV stations broadcast an information service called Teletext which allows you to receive various information, such as stock market reports and news.

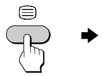


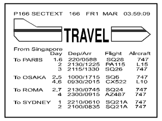
Displaying Teletext

1 Select a TV channel that carries the Teletext broadcast you want to watch.

2 Press ▤ to display the text.

A Teletext page (normally the index page) is displayed. If there is no Teletext broadcast, "100?" is displayed at the top left corner of the screen after approximately 10 seconds.





```
P166 SECTEXT   166   FR1  MAR   03:59:09
                TRAVEL
From Singapore
                Day   Dep/Arr     Flight   Aircraft
To PARIS        1.6   220/0588    SQ28      747
                  2   2130/1225   PA115     L15
                  3   2115/1330   SQ26      747

To OSAKA        2.5   1000/1715   SQ6       747
                4.6   0930/2015   CX522     L10

To ROMA         2.7   2130/0745   SQ24      747
                  4   2300/0915   AZ487     747

To SYDNEY         1   2210/0610   SQ21A     747
                  2   2100/0835   SQ21A     747
```

To turn off Teletext

Press ▢.

Additional Teletext tasks

To	Do this
display a Teletext page on the TV picture	Press ⊜. Each time you press ⊜ , the screen changes as follows: Teletext → Teletext and TV → TV.
check the contents of a Teletext service	Press ⊡. An overview of the Teletext contents, including page numbers, appears on the screen.
select a Teletext page	Press the number buttons to enter the three-digit page number of the desired Teletext page.* If you make a mistake, reenter the correct page number. To access the next or previous page, press PROGR +/–.
hold (pause) a Teletext page (stop the page from scrolling)	Press ⊞ to display the symbol "⊞" at the top left corner of the screen. To resume normal Teletext viewing, press ⊞ or ⊜.
reveal concealed information (e.g., an answer to a quiz)	Press ⍰. To conceal the information, press the button again.
enlarge the Teletext display	Press ⬍. Each time you press ⬍, the Teletext display changes as follows: Enlarge upper half → Enlarge lower half → Normal size.
stand by for a Teletext page while watching a TV program	1 Enter the Teletext page number that you want to refer to, then press ⊠. 2 When the page number is displayed, press ⊜ to show the text.

* You can also select a Teletext page of any page number that appears in the colored column at the bottom of the screen using the corresponding color-coded button on the remote.

Using FASTEXT

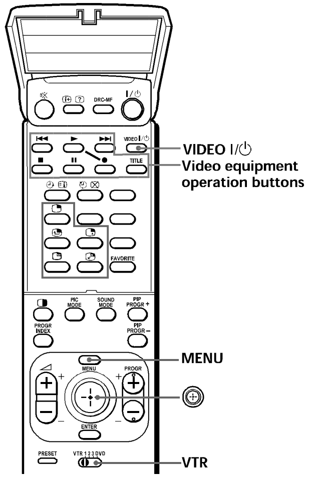
This feature allows you to quickly access a Teletext page that uses FASTEXT. When a FASTEXT program is broadcast, colored menus appear at the bottom of the screen. The color of each menu corresponds to the color-coded buttons on the remote (red ▭ , green ▭ , yellow ▭ , and blue ▭).

To access a FASTEXT menu

Press the color-coded button on the remote corresponding to the menu you want. The menu page appears on the screen after a few seconds.

Operating optional components

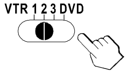
You can use the supplied remote to operate Sony video equipment such as Beta, 8 mm, VHS or DVD.



Setting up the remote to work with other connected equipment

Switch VTR to select the desired equipment type (see the chart below).

For example, to operate a Sony 8 mm VCR:



To control	Select
DVD	DVD
VTR1 (Beta)	1
VTR2 (8 mm)	2
VTR3 (VHS)	3

Notes

- If your video equipment is furnished with a COMMAND MODE selector, set this selector to the same position as the VTR switch.
- If the equipment does not have a certain function, the corresponding button on the remote will not operate.

Operating a VCR using the remote

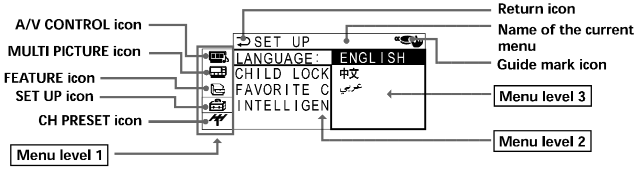
To	Press
turn on/off	VIDEO I /⏻
record	► while pressing ●.
play	►
stop	■
fast forward (►►)	►►I
rewind the tape (◄◄)	I◄◄
pause	II Press again to resume normal playback.
search the picture forward (►►) or backward (◄◄)	►►I or I◄◄ during playback. Release to resume normal playback.

Operating a DVD player using the remote

To	Press
turn on/off	VIDEO I /⏻
play	►
stop	■
pause	II Press again to resume normal playback.
step through different tracks of an audio disc	►►I to step forward or I◄◄ to step backward.
display the title menu	TITLE
display the menu	MENU while holding down ●.
select the menu item	Move ⊕ up, down, left or right while holding down ●.

Introducing the menu system

The MENU button lets you open a menu and change the settings of your projection TV. The following is an overview of the menu system.


A/V CONTROL icon
MULTI PICTURE icon
FEATURE icon
SET UP icon
CH PRESET icon
Menu level 1
SET UP
LANGUAGE:
CHILD LOCK
FAVORITE C
INTELLIGEN
ENGLISH
中文
عربي
Return icon
Name of the current menu
Guide mark icon
Menu level 3
Menu level 2

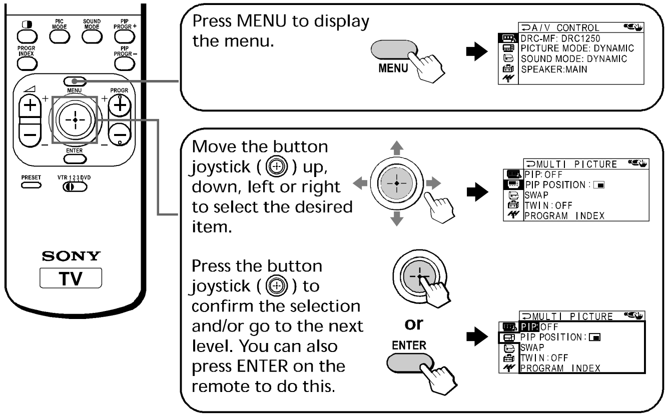
Level 1	Level 2	Level 3/Function
"A/V CONTROL"	"DRC-MF"	Select the "DRC-MF" mode: "DRC1250" → "DRC100"
	"PICTURE MODE"	Select the picture mode: "DYNAMIC" → "STANDARD" → "HI-FINE" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "PICTURE" → "COLOR" → "BRIGHT" → "HUE" → "SHARP"
	"SOUND MODE"	Select the sound mode: "DYNAMIC" → "DRAMA" → "SOFT" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "BASS" → "TREBLE" → "BALANCE"
	"SPEAKER"	Select the "SPEAKER" mode: "MAIN" → "CENTER IN"
"MULTI PICTURE"	"PIP"	Activate or deactivate the PIP feature.
	"PIP POSITION"	Change the position of the sub screen.
	"SWAP"	Swap the pictures between the main and sub screens.
	"TWIN"	Display a TV program or video beside the main screen.
	"PROGRAM INDEX"	Display all the preset TV programs at the same time.
"FEATURE"	"WIDE MODE"	Activate or deactivate WIDE MODE feature.
	"ECO MODE"	Activate or deactivate ECO MODE feature.
	"GAME MODE"	Activate or deactivate GAME MODE feature.

Level 1	Level 2	Level 3/Function
“SET UP”	“LANGUAGE”	Change the menu language: “ENGLISH” → “中文” (Chinese) → “عربي” (Arabic)
	“CHILD LOCK”	Lock out specific channels.
	“FAVORITE CH”	Set favorite channels.
	“INTELLIGENT VOL”	Adjust the volume automatically.
“CH PRESET”	“AUTO PROGRAM”	Preset channels automatically.
	“MANUAL PROGRAM”	Preset channels manually.
	“SKIP”	Skip unwanted or unused program numbers.
	“TV SYS”	Select the TV system: “B/G” → “I” → “D/K” → “ M”
	“COL SYS”	Select the color system: “AUTO” →“ PAL” → “SECAM” → “NTSC3.58” → “NTSC4.43”

continued

Introducing the menu system (continued)

How to use the menu


PIC MODE
SOUND MODE
PIP PROGR +
PROGR INDEX
PIP PROGR –
MENU
PROGR
ENTER
PRESET
VTR 1 2 3 DVD
SONY
TV
MENU
⊃A/V CONTROL
DRC-MF: DRC1250
PICTURE MODE: DYNAMIC
SOUND MODE: DYNAMIC
SPEAKER:MAIN
⊃MULTI PICTURE
PIP:OFF
PIP POSITION :
SWAP
TWIN:OFF
PROGRAM INDEX
or
ENTER
⊃MULTI PICTURE
PIP:OFF
PIP POSITION :
SWAP
TWIN:OFF
PROGRAM INDEX

Press MENU to display the menu.

Move the button joystick (⊕) up, down, left or right to select the desired item.

Press the button joystick (⊕) to confirm the selection and/or go to the next level. You can also press ENTER on the remote to do this.

Other menu operations

To	Press/Move
Adjust the setting value	Move ⊕ up, down, left or right.
Move to the next/previous menu level	Move ⊕ left or right.
Cancel the menu	Press MENU.

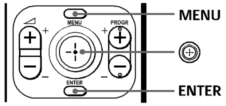
Tips

- If you want to exit from Menu level 2 to Menu level 1, move ⊕ up or down until the return icon (⊃) is highlighted, then press ⊕ or ENTER.
- The MENU, ENTER, and ◿ +/– buttons on the projection TV can also be used for the operations above.
- The ⬆ + and ⬇ – buttons on the projection TV can also be used instead of moving the button joystick (⊕) up or down.

Note

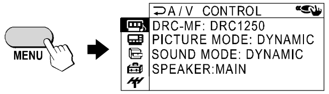
- If more than 60 seconds elapse between entries, the menu screen automatically disappears.

Changing the "A/V CONTROL" setting

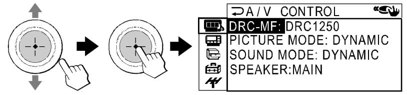

MENU
PROGR
ENTER
MENU
⊕
ENTER

The "A/V CONTROL" menu allows you to adjust the picture and sound settings.

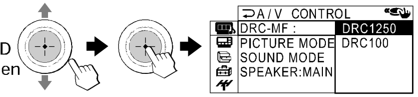
1 Press MENU.


MENU
A/V CONTROL
DRC-MF: DRC1250
PICTURE MODE: DYNAMIC
SOUND MODE: DYNAMIC
SPEAKER:MAIN

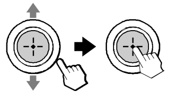
2 Move ⊕ up or down to select 🎛, then press ⊕.


A/V CONTROL
DRC-MF: DRC1250
PICTURE MODE: DYNAMIC
SOUND MODE: DYNAMIC
SPEAKER:MAIN

3 Move ⊕ up or down to select either "DRC-MF", "PICTURE MODE", "SOUND MODE", or "SPEAKER", then press ⊕.


A/V CONTROL
DRC-MF :
PICTURE MODE
SOUND MODE
SPEAKER:MAIN
DRC1250
DRC100

4 Move ⊕ up or down to select the desired option, then press ⊕.



For	Select
"DRC-MF"	either "DRC1250" or "DRC100".
"PICTURE MODE"	either "DYNAMIC", "STANDARD", "HI-FINE", "PERSONAL"*, or "ADJUST".
"SOUND MODE"	either "DYNAMIC", "DRAMA", "SOFT", "PERSONAL"*, or "ADJUST".
"SPEAKER"	either "MAIN" or "CENTER IN".

* When the "PERSONAL" mode is selected, the last adjusted picture/sound settings from the "ADJUST" option are received (see page 34).

Tip

- For details on the options under the "DRC-MF", "PICTURE MODE"/"SOUND MODE", and "SPEAKER" modes, see pages 18, 17 and 35 respectively.

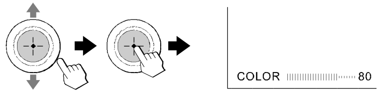
To return to the normal screen

Press MENU.

continued

Adjusting the "ADJUST" options under "PICTURE MODE"

1 Move ⊕ up or down to select the desired item (e.g., "COLOR"), then press ⊕.



2 Adjust the value according to the following table, then press ⊕.

For	Move ⊕ down or left to	Move ⊕ up or right to
"PICTURE"	decrease picture contrast	increase picture contrast
"COLOR"	decrease color intensity	increase color intensity
"BRIGHT"	darken the picture	brighten the picture
"HUE"*	increase red picture tones	increase green picture tones
"SHARP"	soften the picture	sharpen the picture

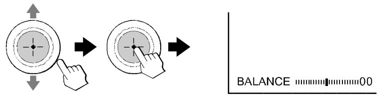
* You can adjust "HUE" for the NTSC color system only.

3 Repeat the above steps to adjust other items.

The adjusted settings will be received when you select "PERSONAL".

Adjusting the "ADJUST" options under "SOUND MODE"

1 Move ⊕ up or down to select the desired item (e.g., "BALANCE"), then press ⊕.



2 Adjust the value according to the following table, then press ⊕.

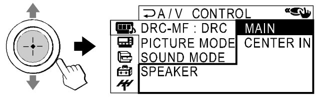
For	Move ⊕
"BASS"	down or left to decrease the bass, up or right to increase the bass.
"TREBLE"	down or left to decrease the treble, up or right to increase the treble.
"BALANCE"	down or left to increase the left speaker's volume, up or right to increase the right speaker's volume.

3 Repeat the above steps to adjust other items.

The adjusted settings will be received when you select "PERSONAL".

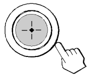
Setting the "SPEAKER" options

1 In the "SPEAKER" menu, move ⊕ up or down to select the desired option (see table below).


A/V CONTROL
DRC-MF : DRC
PICTURE MODE
SOUND MODE
SPEAKER
MAIN
CENTER IN

Select	To
"MAIN"	listen to the sound from a projection TV.
"CENTER IN"	use the projection TV speakers as center speakers.

2 Press ⊕ to confirm the selected option.

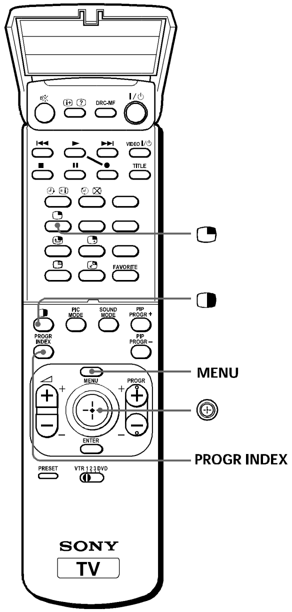


Tip

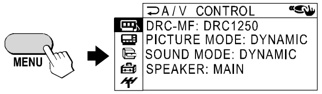
- For details on the menu system and how to use the menu, refer to "Introducing the menu system" on page 30.

Changing the "MULTI PICTURE" setting

The "MULTI PICTURE" menu allows you to use the Picture-in-Picture (PIP), TWIN pictures, or PROGRAM INDEX features.

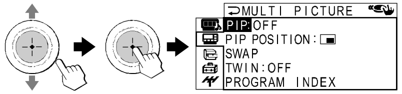

MENU
⊕
PROGR INDEX
SONY
TV

1 Press MENU.



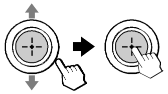
A/V CONTROL
DRC-MF: DRC1250
PICTURE MODE: DYNAMIC
SOUND MODE: DYNAMIC
SPEAKER: MAIN

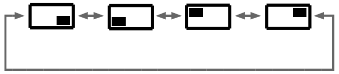
2 Move ⊕ up or down to select ▭, then press ⊕.



MULTI PICTURE
PIP:OFF
PIP POSITION:▭
SWAP
TWIN:OFF
PROGRAM INDEX

3 Move ⊕ up or down to select the desired option (see the table below), then press ⊕.



Select	To
"PIP"	display the PIP screen within the main picture. Move ⊕ up or down to select "ON", then press ⊕. To cancel, press ◘ or select "OFF", then press ⊕.
"PIP POSITION"	change the position of the PIP screen. Move ⊕ up or down to select the desired position, then press ⊕. 
"SWAP"	swap the main and PIP screens, or right and left pictures of the TWIN pictures.
"TWIN"	display a different TV program or video beside the main picture. Move ⊕ up or down to select "ON", then press ⊕. To cancel, press ◨ or select "OFF", then press ⊕.
"PROGRAM INDEX"	view multiple programs on the sub-screens. To cancel, press PROGR INDEX.

To return to the normal screen

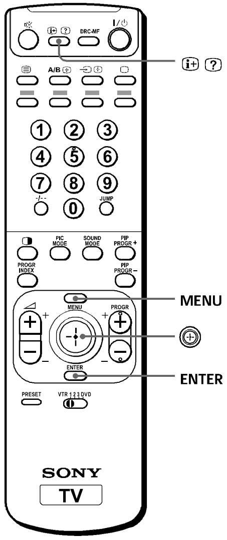
Press MENU.

Tip

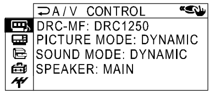
- For details on the menu system and how to use the menu, see "Introducing the menu system" on page 30.

Changing the "FEATURE" setting

The "FEATURE" menu allows you to change the size of the picture on the screen when receiving wide mode (16:9) picture signals. You can also adjust the picture setting that is suitable for viewing video games, and reduce the power consumption of your projection TV.

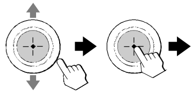


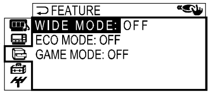
1 Press MENU.



A/V CONTROL
DRC-MF: DRC1250
PICTURE MODE: DYNAMIC
SOUND MODE: DYNAMIC
SPEAKER: MAIN

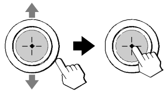
2 Move ⊕ up or down to select ▤, then press ⊕.



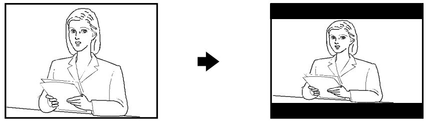


FEATURE
WIDE MODE: OFF
ECO MODE: OFF
GAME MODE: OFF

3 Move ⊕ up or down to select the desired option (see the table below), then press ⊕.



Select	To
"WIDE MODE"	change the size of the picture when receiving wide-mode (16:9) picture signal. Move ⊕ up or down to select "ON", then press ⊕. To restore the normal picture size, select "OFF" then press ⊕.
"ECO MODE"	reduce power consumption of your projection TV to save energy. Move ⊕ up or down to select "ON", then press ⊕. To cancel, select "OFF", then press ⊕.
"GAME MODE"	adjust the picture setting that is suitable to view video games. Move ⊕ up or down to select "ON", then press ⊕. To cancel, select "OFF", then press ⊕.



Notes

- When you turn on "ECO MODE", the picture may become dimmer. Turning "ECO MODE" off will restore the picture to its original setting.
- "WIDE MODE" is available only when you have selected DRC1250 (NTSC mode) in the "A/V CONTROL" menu with video input or DVD input.
- "WIDE MODE" and "GAME MODE" is available only when receiving signals through the ⊸ (video input), ⊸ (S video input), or ⊸ (component video input) jacks at the front and rear of your projection TV.
- If "ECO MODE" is on, the ECO MODE (ECO) icon will appear at the bottom right corner of the screen when you turn on the projection TV or when you press ⊞ on the remote. (See pages 13 and 14)

To return to the normal screen

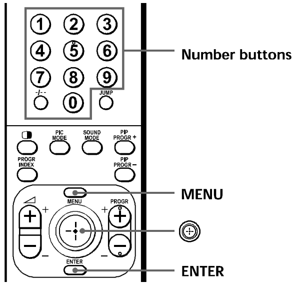
Press MENU.

Tip

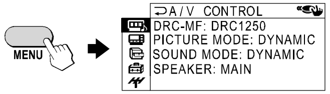
- For details on the menu system and how to use the menu, see "Introducing the menu system" on page 30.

Changing the "SET UP" setting

The "SET UP" menu allows you to: change the menu language, block channels, adjust the picture position, program your favorite channels, and adjust the volume automatically.

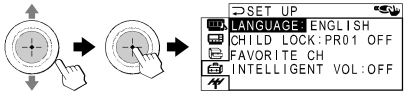


1 Press MENU.



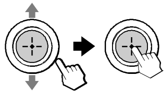
A/V CONTROL
DRC-MF: DRC1250
PICTURE MODE: DYNAMIC
SOUND MODE: DYNAMIC
SPEAKER: MAIN

2 Move ⊕ up or down to select 🖨, then press ⊕.



SET UP
LANGUAGE: ENGLISH
CHILD LOCK:PR01 OFF
FAVORITE CH
INTELLIGENT VOL:OFF

3 Move ⊕ up or down to select the desired option, then press ⊕.



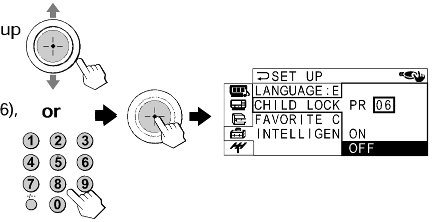
Select	To
"LANGUAGE"	change the menu language (see page 15).
"CHILD LOCK"	block channels (see page 41).
"FAVORITE CH"	select your favorite channels (see pages 19 and 42).
"INTELLIGENT VOL"	adjust the volume of all TV programs automatically. Move ⊕ up or down to select "ON", then press ⊕. To cancel, select "OFF", then press ⊕.

To return to the normal screen

Press MENU.

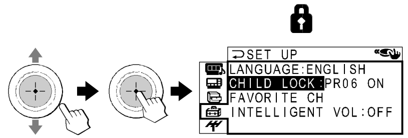
Blocking channels ("CHILD LOCK")

1 After selecting "CHILD LOCK", either move ⊕ up or down, or press the number buttons (or PROGR +/–) to select the desired channel (e.g. PR 06), then press ⊕.

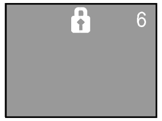

or
1
2
3
4
5
6
7
8
9
-/--
0
SET UP
LANGUAGE : E
CHILD LOCK
PR 06
FAVORITE C
INTELLIGEN
ON
OFF

2 Move ⊕ up or down to select "ON", then press ⊕.
To unlock the channel, select "OFF".

The lock symbol (🔒) appears on the screen when "ON" is selected.


SET UP
LANGUAGE:ENGLISH
CHILD LOCK:PR06 ON
FAVORITE CH
INTELLIGENT VOL:OFF

If a locked channel is selected, the lock symbol appears on the screen.



3 Repeat steps 1 and 2 to lock other channels.

To return to the normal screen

Press MENU.

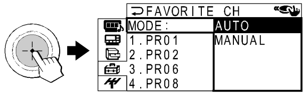
Note

- If you preset a locked channel, that channel will be unlocked automatically (see page 43).

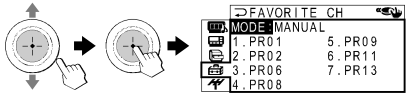
continued

Changing the favorite channel setting

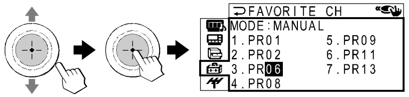
1 After selecting "FAVORITE CH", make sure "MODE" is selected, then press ⊕.


FAVORITE CH
MODE :
AUTO
MANUAL
1 . PR01
2 . PR02
3 . PR06
4 . PR08

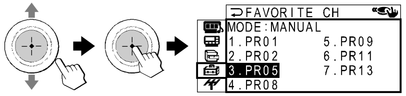
2 Move ⊕ up or down to select "MANUAL", then press ⊕.


FAVORITE CH
MODE : MANUAL
1 . PR01
2 . PR02
3 . PR06
4 . PR08
5 . PR09
6 . PR11
7 . PR13

3 Move ⊕ up or down to select the program you want to change, then press ⊕.


FAVORITE CH
MODE : MANUAL
1 . PR01
2 . PR02
3 . PR06
4 . PR08
5 . PR09
6 . PR11
7 . PR13

4 Move ⊕ up or down to change the number, then press ⊕.


FAVORITE CH
MODE : MANUAL
1 . PR01
2 . PR02
3 . PR05
4 . PR08
5 . PR09
6 . PR11
7 . PR13

5 Repeat steps 3 and 4 to set other channels.

To return to the normal screen

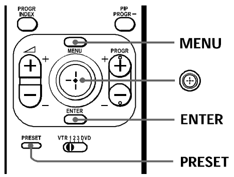
Press MENU.

Note

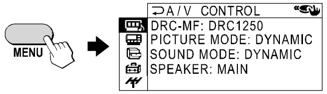
- If you press the PROGR +/– buttons or number buttons in step 4 above, the projection TV will display the channel immediately.

Changing the "CH PRESET" setting

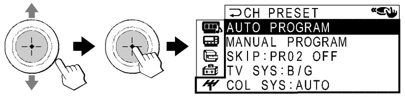
The "CH PRESET" menu allows you to adjust the setup of your projection TV. For example, you can manually tune in a channel with a weak signal that fails to be tuned in by automatic presetting.


PROGR INDEX
PIP PROGR –
MENU
PROGR
ENTER
PRESET
VTR 1 2 3 DVD
MENU
⊕
ENTER
PRESET

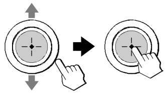
1 Press MENU.


MENU
A/V CONTROL
DRC-MF: DRC1250
PICTURE MODE: DYNAMIC
SOUND MODE: DYNAMIC
SPEAKER: MAIN

2 Move ⊕ up or down to select 🝖, then press ⊕.


CH PRESET
AUTO PROGRAM
MANUAL PROGRAM
SKIP:PR02 OFF
TV SYS:B/G
COL SYS:AUTO

3 Move ⊕ up or down to select the desired option, then press ⊕.



Select	To
"AUTO PROGRAM"	preset channels automatically.
"MANUAL PROGRAM"	preset channels manually. See "Presetting channels manually" on page 44.
"SKIP"	skip unwanted or unused channels. 1 Either move ⊕ up or down, or press the number buttons (or PROGR +/–) until the unused or unwanted channel number appears, then press ⊕. 2 Select "ON", then press ⊕. 3 To disable other channels, repeat steps 1 and 2. To restore the skipped channel, select "OFF" in step 2.
"TV SYS"	select the TV system.
"COL SYS"	select the color system. Normally, set this to "AUTO".

To return to the normal screen

Press MENU.

Tip

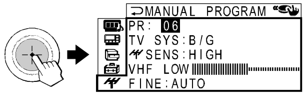
- For details on the menu system and how to use the menu, refer to "Introducing the menu system" on page 30.

continued

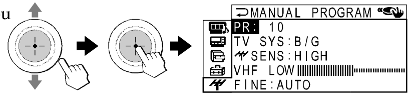
Presetting channels manually

1 After selecting "MANUAL PROGRAM", select the program number to which you want to preset a channel.

(1) Make sure "PR" is selected, then press ⊕.


MANUAL PROGRAM
PR: 06
TV SYS:B/G
SENS:HIGH
VHF LOW
FINE:AUTO

(2) Move ⊕ up or down until the program number you want to preset (e.g., program number "10") appears on the menu, then press ⊕.

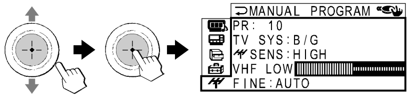

MANUAL PROGRAM
PR: 10
TV SYS:B/G
SENS:HIGH
VHF LOW
FINE:AUTO

Tips

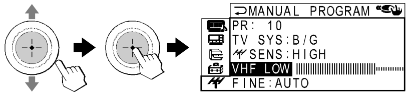
- You can also select the "MANUAL PROGRAM" menu directly by pressing the PRESET button on the remote.
- You can also select the program number with the PROGR +/– or number buttons.

2 Select the desired channel.

(1) Move ⊕ up or down to select either "VHF LOW", "VHF HIGH", or "UHF", then press ⊕.

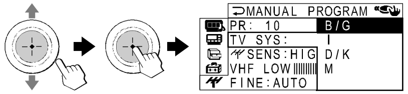

MANUAL PROGRAM
PR: 10
TV SYS:B/G
SENS:HIGH
VHF LOW
FINE:AUTO

(2) Move ⊕ up or down until the desired channel's broadcast appears on the TV screen, then press ⊕.

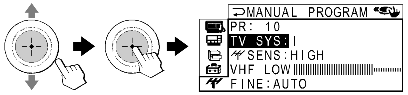

MANUAL PROGRAM
PR: 10
TV SYS:B/G
SENS:HIGH
VHF LOW
FINE:AUTO

3 If the sound of the desired channel is abnormal, select the appropriate TV system.

(1) Move ⊕ up or down to select "TV SYS", then press ⊕.

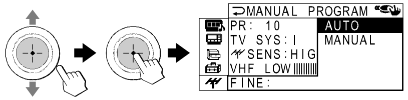

MANUAL PROGRAM
PR: 10
TV SYS:
SENS:HIG
VHF LOW
FINE:AUTO
B/G
I
D/K
M

(2) Move ⊕ up or down until the sound becomes normal, then press ⊕.

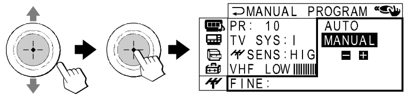

MANUAL PROGRAM
PR: 10
TV SYS: I
SENS:HIGH
VHF LOW
FINE:AUTO

4 If you are not satisfied with the picture and sound quality, you may be able to improve them by using the "FINE" tuning feature.

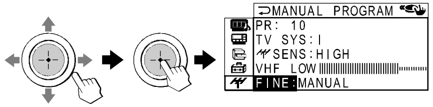
(1) Move ⊕ up or down to select "FINE", then press ⊕.


MANUAL PROGRAM
PR: 10
TV SYS: I
SENS: HIG
VHF LOW
FINE:
AUTO
MANUAL

(2) Move ⊕ up or down to select "MANUAL", then press ⊕.

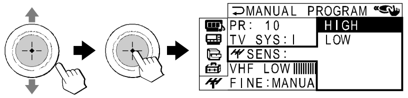

MANUAL PROGRAM
PR: 10
TV SYS: I
SENS: HIG
VHF LOW
FINE:
AUTO
MANUAL
− +

(3) Move ⊕ either up, down, left or right until the picture and sound quality are optimal, then press ⊕. The + or – icon on the menu flashes while tuning.

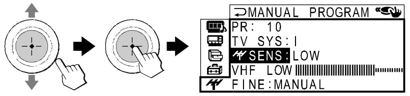

MANUAL PROGRAM
PR: 10
TV SYS: I
SENS: HIGH
VHF LOW
FINE: MANUAL

5 If the TV signal is too strong and the picture is distorted, you can adjust the TV reception sensitivity.

(1) Move ⊕ up or down to select "Ψ SENS", then press ⊕.


MANUAL PROGRAM
PR: 10
TV SYS: I
SENS:
VHF LOW
FINE: MANUA
HIGH
LOW

(2) Move ⊕ up or down to select "LOW", then press ⊕.


MANUAL PROGRAM
PR: 10
TV SYS: I
SENS: LOW
VHF LOW
FINE: MANUAL

To return to the normal screen

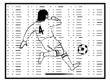
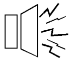
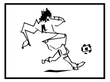
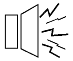
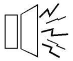
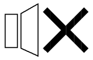
Press MENU.

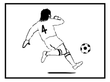
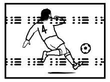
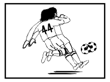
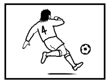
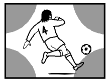
Notes

- The TV system ("TV SYS") and the TV reception sensitivity ("Ψ SENS") settings are memorized for each program number.
- If you preset a locked channel, that channel will be unlocked automatically (see page 41).

Troubleshooting

If you have any problem while viewing your TV, please check the following troubleshooting guide. If the problem persists, contact your Sony dealer.

Symptom	Possible cause	Solutions	Page
Snowy picture  **Noisy sound** 	• The connection is loose or the cable is damaged.	• Check the antenna cable and connection on the projection TV, VCR and at the wall.	5
	• Channel presetting is inappropriate or incomplete.	• Press the PRESET button to display the "MANUAL PROGRAM" menu and preset the channel again.	44
	• The antenna type is inappropriate.	• Check the antenna type (VHF/UHF). Contact a Sony dealer for advice.	–
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Signal transmission is low.	• Try using a booster.	–
Distorted picture  **Noisy sound** 	• Broadcast signals are too strong.	• Press the PRESET button to display the "MANUAL PROGRAM" menu. Then, select "Ψ SENS: LOW". • Turn off or disconnect the booster if it is in use.	45 –
Good picture **Noisy sound** 	• The TV system setting is inappropriate.	• If the sound of all the channels are noisy, display the "CH PRESET" menu and select "AUTO PROGRAM" to preset the channels again. • If the sound of some channels is noisy, select the channel, then display the "CH PRESET" menu and select the appropriate TV system ("TV SYS").	43 44
No picture **No sound** 	• The power cord, antenna or VCR is not connected.	• Check the power cord, antenna and the VCR connections.	5
	• The projection TV is not turned on.	• Press I/⏻ on the remote. • Press ⏻ on the TV to turn off the projection TV for about five seconds, then turn it on again.	13 14

Symptom	Possible cause	Solutions	Page
Good picture  **No sound**	• The volume level is too low.	• Press ⊿ + to increase the volume level.	14
	• The sound is muted.	• Press 🔇 to cancel the muting.	14
	• The broadcast signal has a transmission problem.	• Press A/B until a better sound is heard.	24
	• The "SPEAKER" setting in the "AV CONTROL" menu is inappropriate.	• When connecting to 🔈← C– (center speaker input) on your projection TV to use the projection TV speakers as center speakers, set SPEAKER: CENTER IN, or set SPEAKER: MAIN to listen to the sound from a projection TV.	35
Dotted lines or stripes 	• There is local interference from cars, neon signs, hair dryers, power generators, etc.	• Do not use a hair dryer or other equipment near the projection TV. • Adjust the antenna direction for minimum interference. Contact a Sony dealer for advice.	– –
Double images or "ghosts" 	• Broadcast signals are reflected by nearby mountains or buildings.	• Use a highly directional antenna. • Use the fine tuning ("FINE") function.	– 45
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Use of a booster is inappropriate.	• Turn off or disconnect the booster if it is in use.	–
No color 	• The color level setting is too low.	• Display the "A/V CONTROL" menu and select "ADJUST" of "PICTURE MODE", then adjust the "COLOR" level.	34
	• The color system setting is inappropriate.	• Display the "CH PRESET" menu and check the color system ("COL SYS") setting (usually set this to "AUTO").	43
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
Abnormal color patches 	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may affect the projection TV.	• Locate external speakers or other equipment away from the projection TV. Do not move the projection TV while the projection TV is turned on. Press ① on the projection TV to turn off the TV for about five minutes, then turn it on again.	–

continued

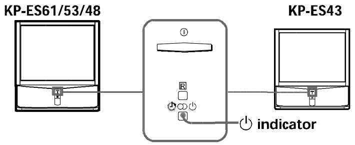
Troubleshooting (continued)

Symptom	Possible cause	Solutions	Page
Projection TV cannot receive stereo broadcast signal.	• The stereo reception setting is inappropriate.	• Press A/B until "AUTO" appears on the screen.	24
Stereo broadcast sound switches on and off or is distorted.	• The connection is loose or the cable is damaged.	• Check the antenna cable and connection on the projection TV, VCR and on the wall.	5
or	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
The sound switches between stereo and monaural frequently.	• The broadcast signal has a transmission problem.	• Press A/B until a better sound is heard.	24
"100?" appears at the top of the screen after approximately 10 seconds and there is no Teletext display.	• The channel carries no Teletext broadcast.	—	26
Teletext display is incomplete (snowy picture or double images).	• Connection is loose or the cable is damaged.	• Check the antenna cable and connection on the projection TV, VCR, and at the wall.	5
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Signal transmission is too low.	• Try using a booster. • Use the fine tuning ("FINE") function.	– 45
Lines moving across the TV screen.	• There is interference from external sources, e.g., heavy machineries, nearby broadcast station.	• Use the fine tuning ("FINE") function.	45
Cannot play shooting games.	• Some shooting games which involve pointing a light beam at the projection TV screen with an electronic gun or rifle cannot be used with your TV. For detail, see the instruction manual supplied with the video game software.	—	–

Symptom	Possible cause	Solutions	Page
TV cabinet creaks.	• Changes in room temperature sometimes make the TV cabinet expand or contract, causing a noise. This does not indicate a malfunction.	—	–
Static discharge is felt when touching the TV cabinet.	• This is the same static discharge that is felt when touching metal door handles or car doors especially when the air is dry, for example in winter. This does not indicate a malfunction.	—	–

Self-diagnosis function

Your projection TV is equipped with a self-diagnosis function. If there is a problem with your projection TV, the ⏻ (standby) indicator flashes red. The number of times the ⏻ indicator flashes indicates the possible causes.



1 Check that the ⏻ indicator flashes red a number of times between 3-second intervals.

2 Count the number of times the ⏻ indicator flashes.

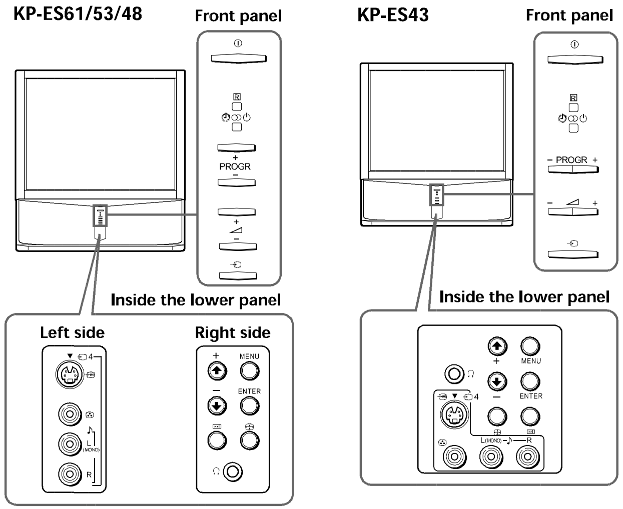
3 Press Ⓘ (main power) to turn off your projection TV.

4 Inform your nearest Sony service center about the number of times the ⏻ indicator flashed.

Be sure to note the model name and serial number located on the rear of your projection TV.

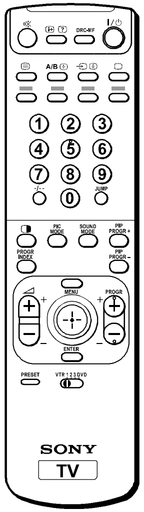
Identifying parts and controls

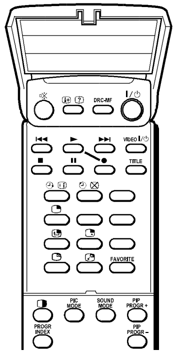
Front and inside the lower panels



Button	Function	Page
Front panel		
Ⓘ	Turn off completely or turn on the projection TV.	13
PROGR +/–	Select program number.	13
⊿ +/-	Adjust volume.	14
⇥	Select TV or video input.	14
Inside the lower panel		
MENU	Display the menu.	32
ENTER	Confirm selected items.	32
⊕	Adjust convergence.	7
⏭	Preset channel automatically.	6
⬆+/⬇–	Select menu item.	32
🎧	Headphone jack	–

Remote control


DRC-MF
I/⏻
A/B
1 2 3
4 5 6
7 8 9
-/--
0
JUMP
PIC MODE
SOUND MODE
PIP PROGR +
PROGR INDEX
PIP PROGR –
MENU
PROGR
ENTER
PRESET
VTR 1 2 3 DVD
SONY
TV


DRC-MF
I/⏻
VIDEO I/⏻
TITLE
FAVORITE
PIC MODE
SOUND MODE
PIP PROGR +
PROGR INDEX
PIP PROGR –

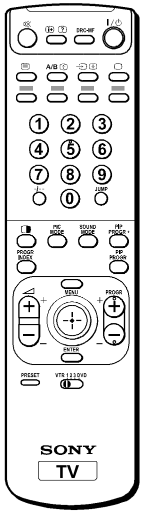
The names/symbols of buttons on the remote are indicated in different colors to represent the available functions.

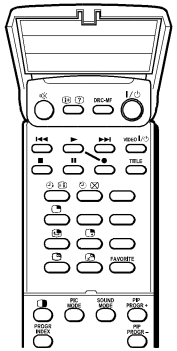
Label color	Button function
White	For general TV operations
Green	For Teletext operations
Yellow	For PIP operations

Button	Function	Page
I / ⏻	Turn off temporarily or turn on the projection TV.	13
PROGR +/–	Select program number.	13
0 – 9, -/--	Input numbers.	13
ⓘ	Display on-screen information.	14
🔇	Mute the sound.	14
▭	Display the TV program.	14
⇥	Select TV or video input.	14
⊿ +/–	Adjust volume.	14
JUMP	Jump to previous channel.	14
Timer operations		
◷	Set projection TV to turn on automatically.	16
◷	Set projection TV to turn off automatically.	16
SOUND MODE	Select sound mode.	17
PIC MODE	Select picture mode.	17
DRC-MF	Select DRC-MF mode.	18
Favorite Channel operations		
FAVORITE	Display favorite channels.	19
⊕	Select desired channel.	19
PIP and Twin picture operations		
◳	Display the PIP screen.	20
◧	Display TWIN pictures.	20
⊕	Adjust Twin picture size.	21
PIP PROGR +/ PIP PROGR –	Change program in PIP/Twin picture.	21
◳	Select video input for PIP/Twin picture.	21
◳	Swap main and PIP/Twin picture.	21
◳	Freeze PIP screen.	21
◳	Adjust position of PIP screen.	21

continued

Identifying parts and controls (continued)


DRC-MF
I/⏻
A/B
1 2 3
4 5 6
7 8 9
-/--
0
JUMP
PIC MODE
SOUND MODE
PIP PROGR +
PROGR INDEX
PIP PROGR –
MENU
PROGR
ENTER
PRESET
VTR 1 2 3 DVD
SONY
TV

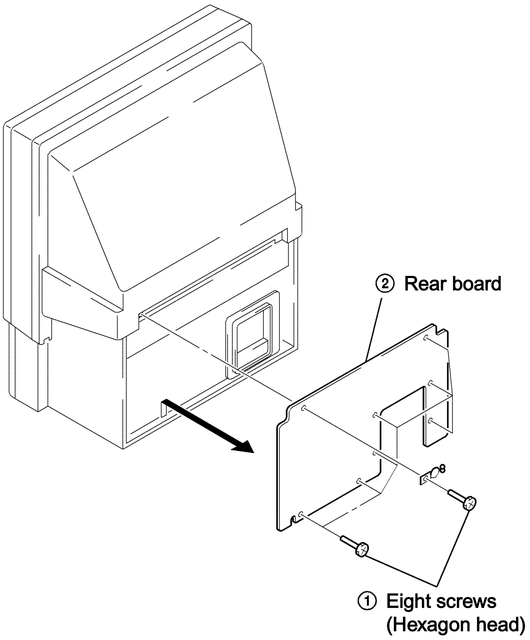

DRC-MF
I/⏻
VIDEO I/⏻
TITLE
FAVORITE
PIC MODE
SOUND MODE
PIP PROGR +
PROGR INDEX
PIP PROGR –

Button	Function	Page
Program Index operations		
PROGR INDEX	Display all preset TV programs.	22
PROGR +/–	View next/previous 12 TV programs.	22
⊕	Select desired channel.	23
Stereo/bilingual operations		
A/B	Select stereo/bilingual mode.	24
Teletext operations		
▤	Display Teletext broadcast.	26
ⓘ	Display Teletext service contents.	27
⇟	Stop Teletext page from scrolling.	27
?	Reveal concealed information.	27
⇕	Enlarge the Teletext display.	27
⊠	Show TV screen while waiting for Teletext page.	27
0 - 9	Input Teletext page number.	27
PROGR +/–	Display the next or previous page.	27
▭ (red, green, yellow, blue)	Access a FASTEXT menu.	27
Optional components operations		
VTR	Set up the remote.	28
VIDEO I/⏻	Power.	29
TITLE	Display the title menu.	29
►	Play.	29
►►I	Fast forward/Search forward.	29
I◄◄	Rewind/Search backward.	29
●	Record.	29
■	Stop.	29
II	Pause.	29
Menu operations		
MENU	Display the menu.	32
⊕	Select, adjust and confirm selected items.	32
ENTER	Confirm selected items.	32
PRESET	Display “MANUAL PROGRAM” menu.	44

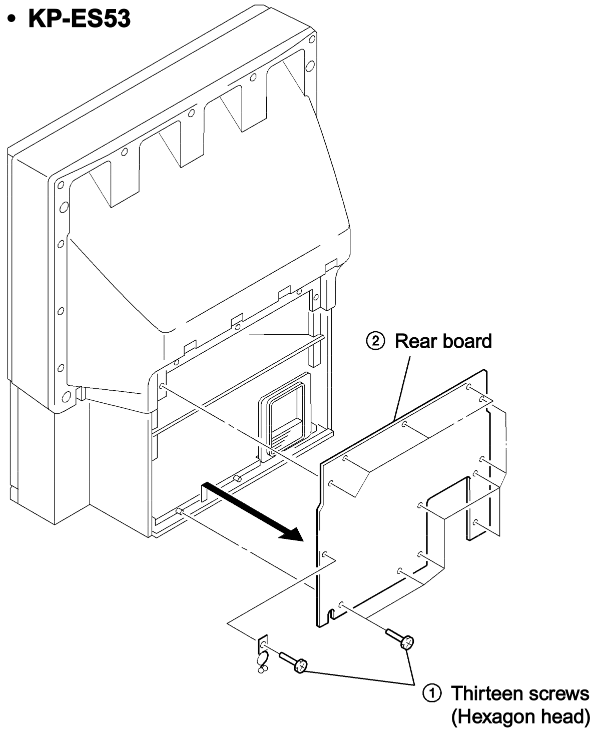
SECTION 3
DISASSEMBLY

3-1. REAR BOARD REMOVAL

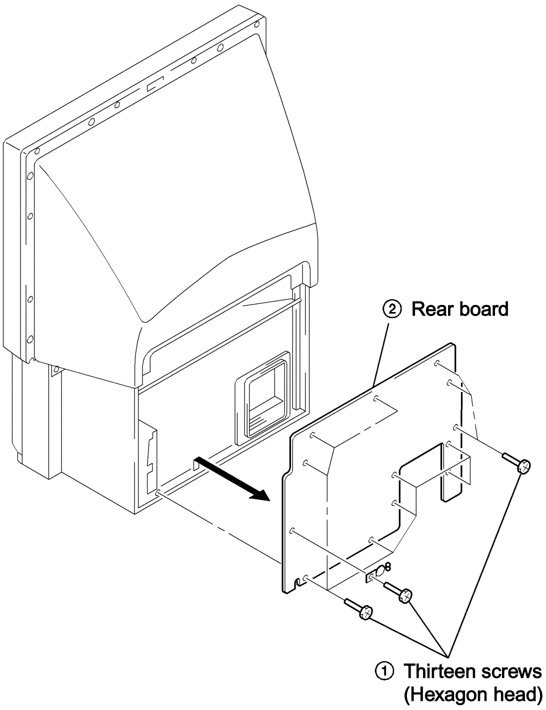
• KP-ES43


② Rear board
① Eight screws
(Hexagon head)

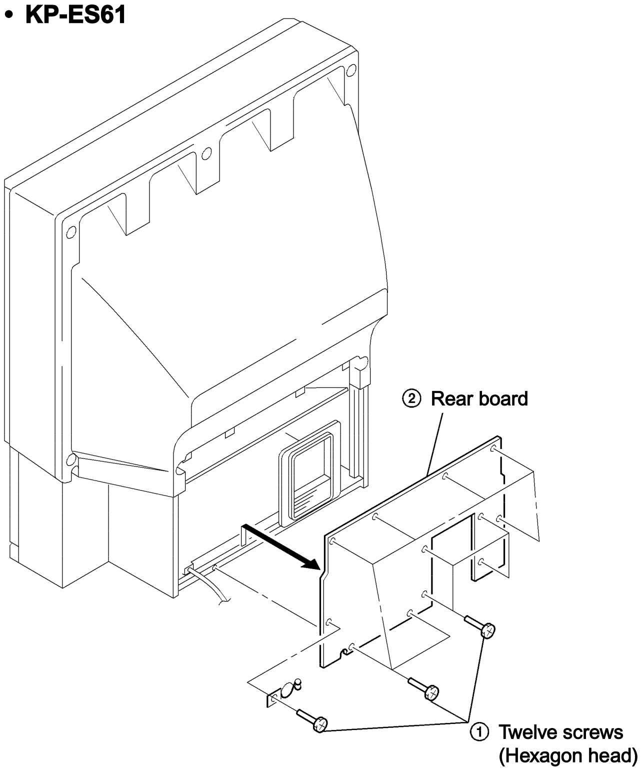
• KP-ES53


② Rear board
① Thirteen screws
(Hexagon head)

• KP-ES48

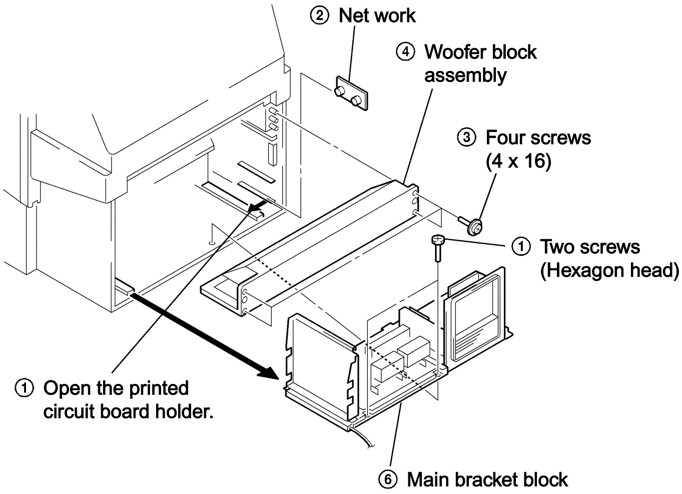

② Rear board
① Thirteen screws
(Hexagon head)

• KP-ES61

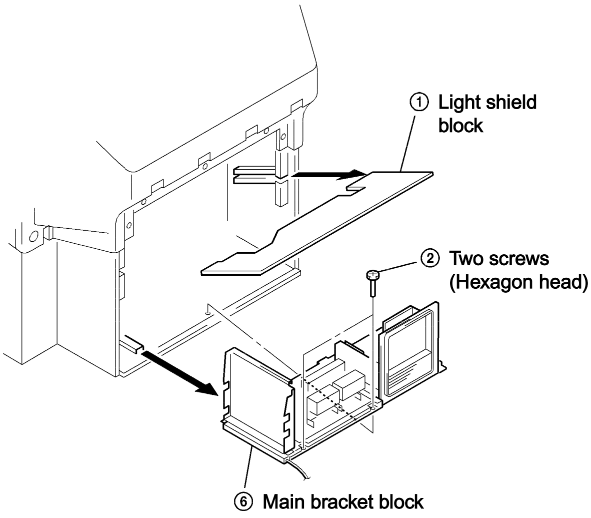

② Rear board
① Twelve screws
(Hexagon head)

3-2. MAIN BRACKET BLOCK REMOVAL

- **KP-ES43**

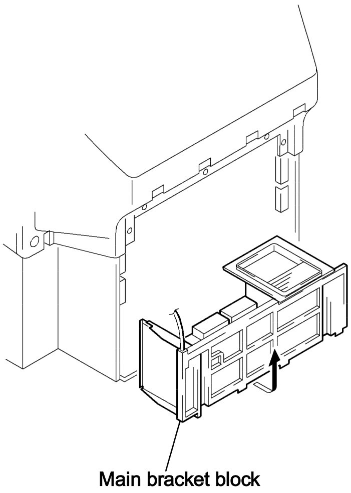

② Net work
④ Woofer block assembly
③ Four screws (4 x 16)
① Two screws (Hexagon head)
① Open the printed circuit board holder.
⑥ Main bracket block

- **KP-ES48/ES53/ES61**


① Light shield block
② Two screws (Hexagon head)
⑥ Main bracket block

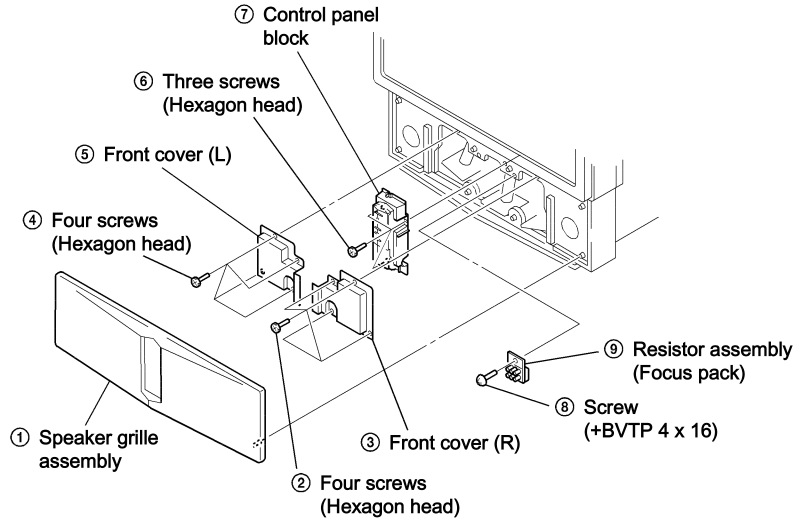
3-3. SERVICE POSITION

- **KP-ES43/ES48/ES53/ES61**

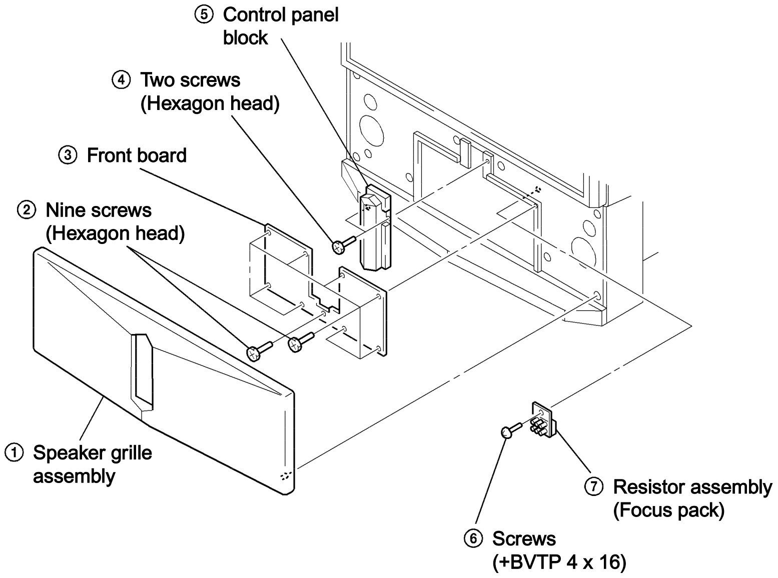

Main bracket block

3-4. CONTROL PANEL BLOCK AND RESISTOR ASSEMBLY (FOCUS PACK) REMOVAL

- **KP-ES43**

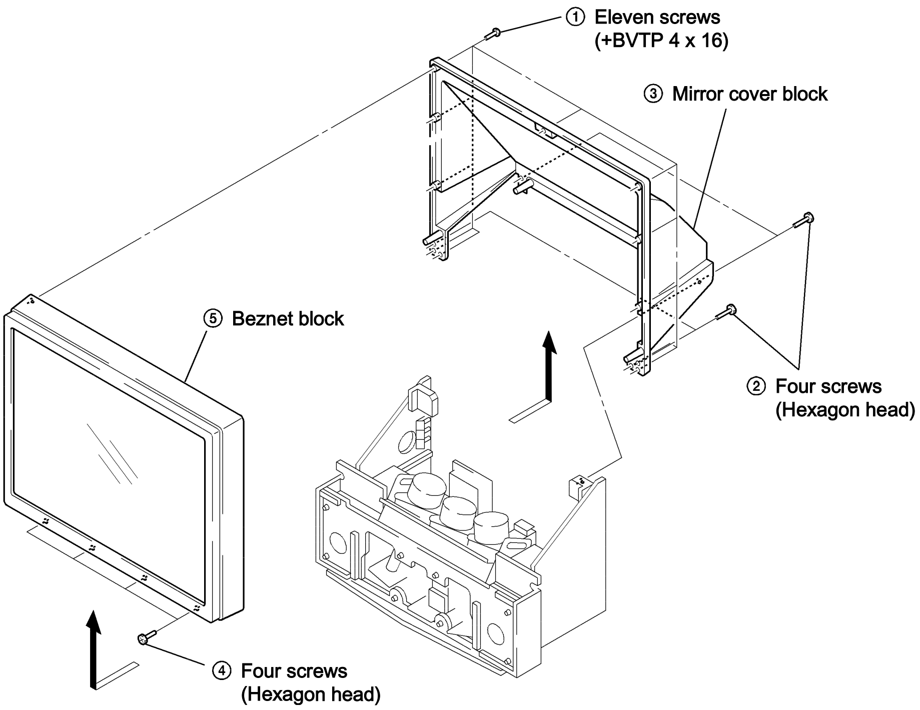

⑦ Control panel block
⑥ Three screws (Hexagon head)
⑤ Front cover (L)
④ Four screws (Hexagon head)
⑨ Resistor assembly (Focus pack)
⑧ Screw (+BVTP 4 x 16)
① Speaker grille assembly
③ Front cover (R)
② Four screws (Hexagon head)

- **KP-ES48/ES53/ES61**

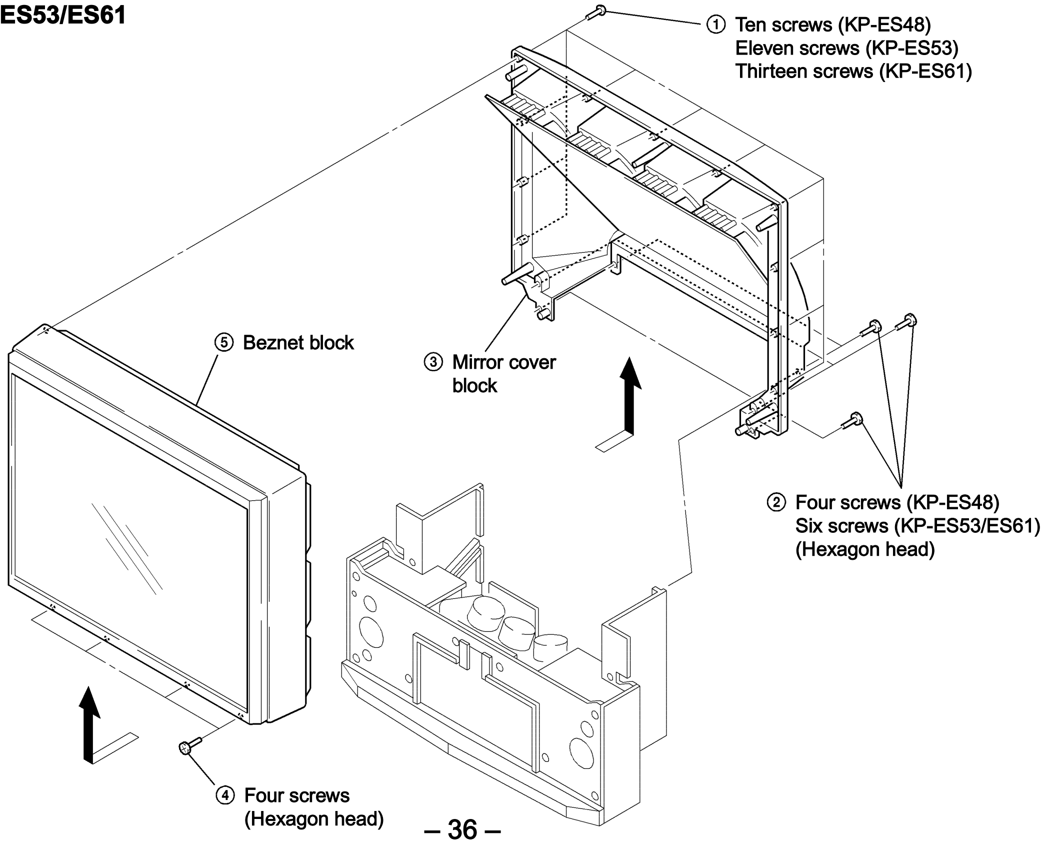

⑤ Control panel block
④ Two screws (Hexagon head)
③ Front board
② Nine screws (Hexagon head)
① Speaker grille assembly
⑦ Resistor assembly (Focus pack)
⑥ Screws (+BVTP 4 x 16)

3-5. BEZNET BLOCK REMOVAL

- **KP-ES43**


① Eleven screws
(+BVTP 4 x 16)
③ Mirror cover block
⑤ Beznet block
② Four screws
(Hexagon head)
④ Four screws
(Hexagon head)

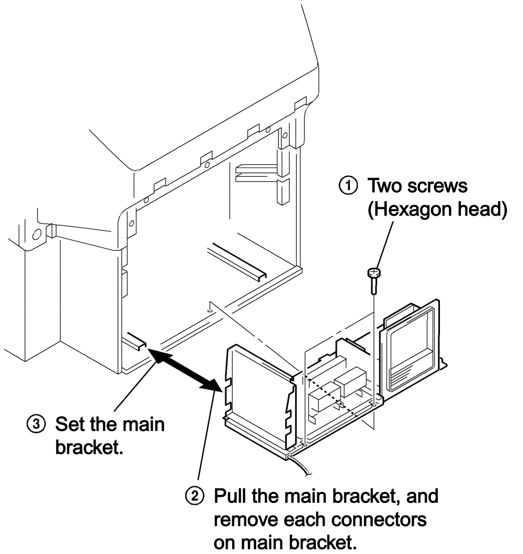
- **KP-ES48/ES53/ES61**


① Ten screws (KP-ES48)
Eleven screws (KP-ES53)
Thirteen screws (KP-ES61)
⑤ Beznet block
③ Mirror cover
block
② Four screws (KP-ES48)
Six screws (KP-ES53/ES61)
(Hexagon head)
④ Four screws
(Hexagon head)

3-6. CHASSIS BLOCK REMOVAL

(1) MAIN BRACKET REMOVAL

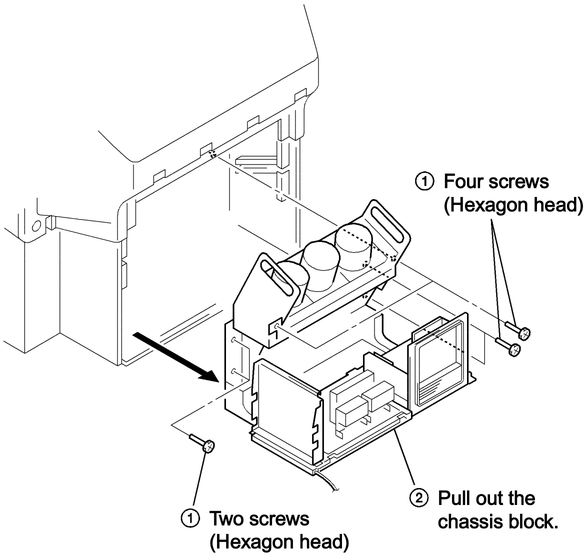
• KP-ES43/ES48/ES53/ES61


① Two screws
(Hexagon head)
③ Set the main
bracket.
② Pull the main bracket, and
remove each connectors
on main bracket.

※ Pay particular attention to the wires of each Printed circuit boards when puling out the main bracket.

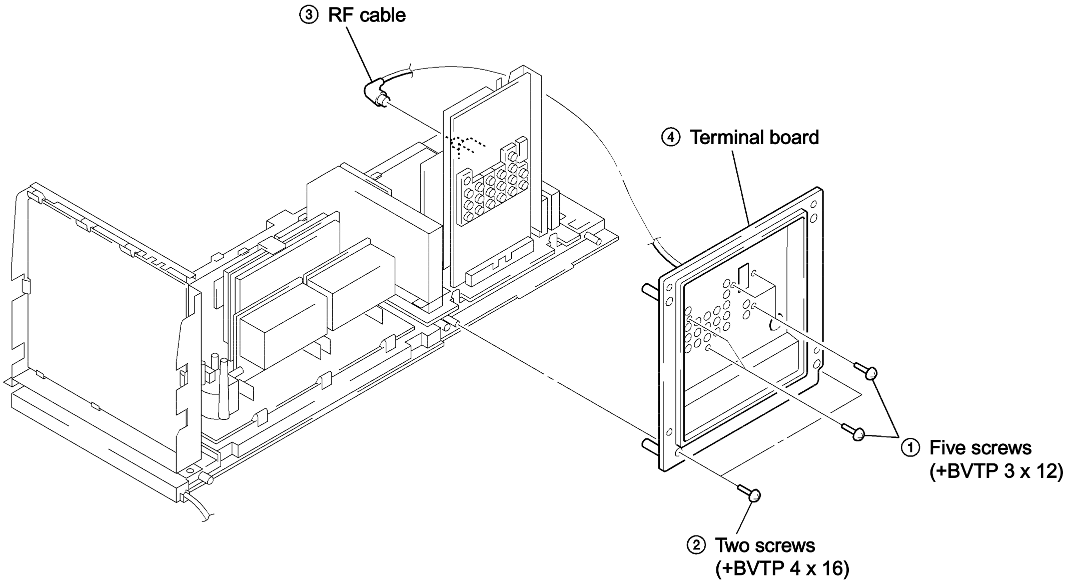
(2) CHASSIS BLOCK REMOVAL

• KP-ES43/ES48/ES53/ES61

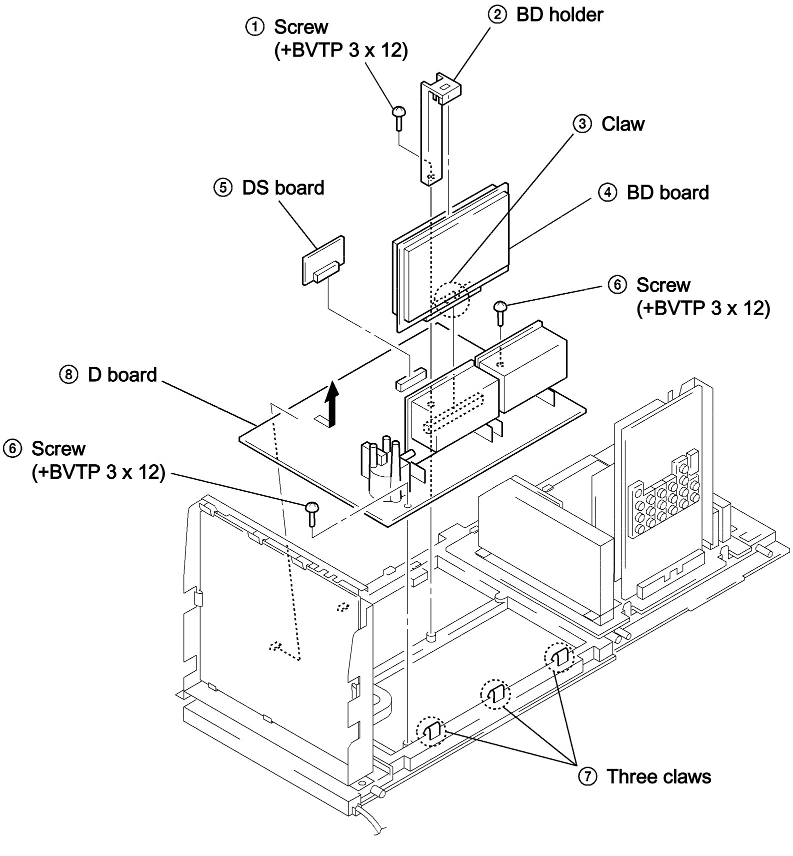

① Four screws
(Hexagon head)
① Two screws
(Hexagon head)
② Pull out the
chassis block.

※ Pull out the chassis block by gripping the handles as shown in the diagram.
At this time, pay particular attention to the components removed in (1).

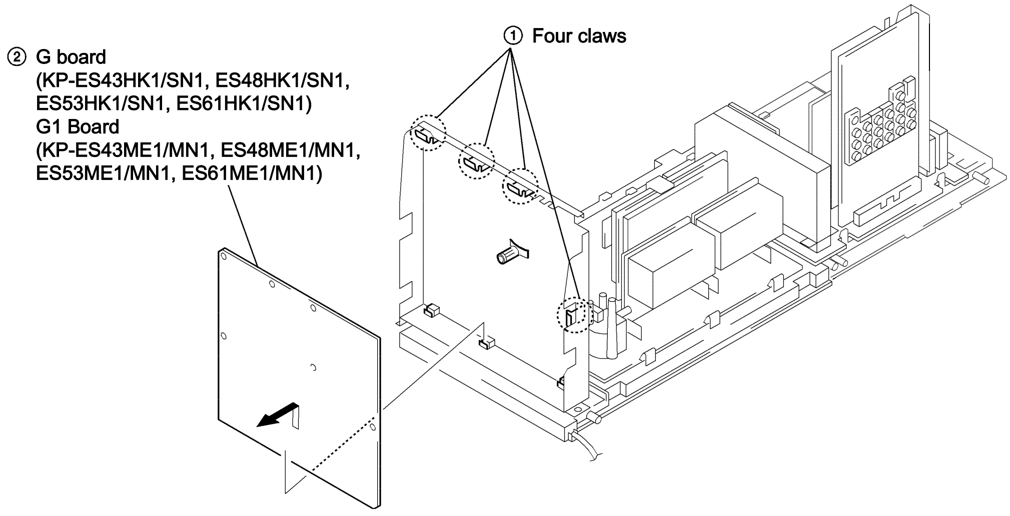
3-7. TERMINAL BOARD REMOVAL


③ RF cable
④ Terminal board
① Five screws (+BVTP 3 x 12)
② Two screws (+BVTP 4 x 16)

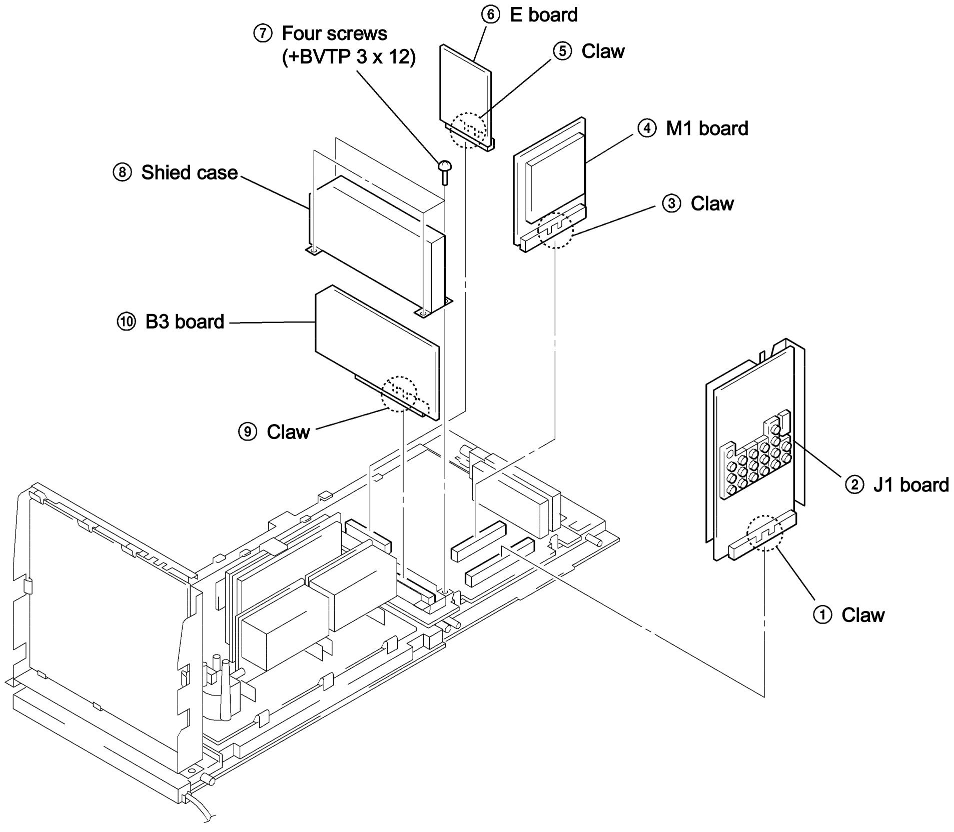
3-8. BD, DS, D BOARDS REMOVAL


① Screw (+BVTP 3 x 12)
② BD holder
③ Claw
⑤ DS board
④ BD board
⑥ Screw (+BVTP 3 x 12)
⑧ D board
⑥ Screw (+BVTP 3 x 12)
⑦ Three claws

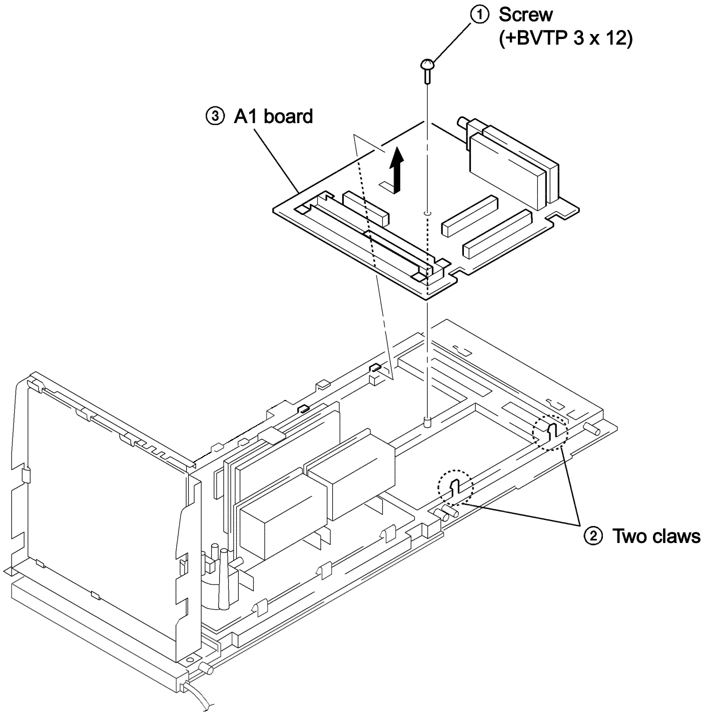
3-9. G, G1 BOARD REMOVAL


① Four claws
② G board
(KP-ES43HK1/SN1, ES48HK1/SN1,
ES53HK1/SN1, ES61HK1/SN1)
G1 Board
(KP-ES43ME1/MN1, ES48ME1/MN1,
ES53ME1/MN1, ES61ME1/MN1)

3-10. J1, B3, E, M1 BOARDS REMOVAL

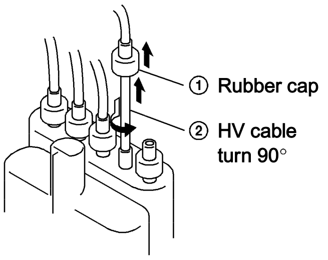

⑦ Four screws
(+BVTP 3 x 12)
⑥ E board
⑤ Claw
④ M1 board
⑧ Shied case
③ Claw
⑩ B3 board
⑨ Claw
② J1 board
① Claw

3-11. A1 BOARD REMOVAL

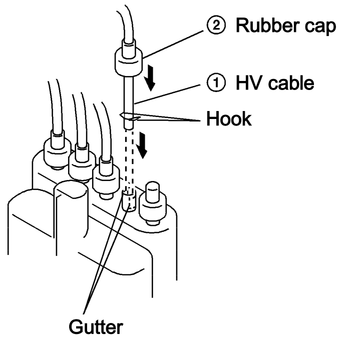

① Screw
(+BVTP 3 x 12)
③ A1 board
② Two claws

3-12. HIGH-VOLTAGE CABLE REMOVAL AND INSTALLATION

(1) Removal

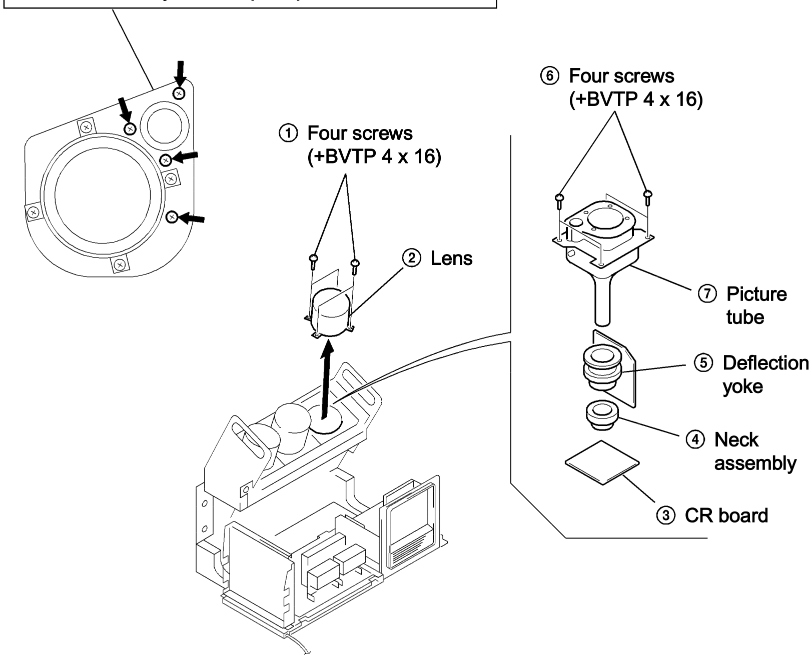

① Rubber cap
② HV cable
turn 90°

(2) Installation


② Rubber cap
① HV cable
Hook
Gutter

3-13. PICTURE TUBE REMOVAL

Removing the arrow-marked screw is strictly inhibited.
If removed, it may cause liquid spill

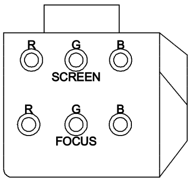

① Four screws
(+BVTP 4 x 16)
② Lens
⑥ Four screws
(+BVTP 4 x 16)
⑦ Picture
tube
⑤ Deflection
yoke
④ Neck
assembly
③ CR board

SECTION 4

SET-UP ADJUSTMENTS

4-1. SCREEN VOLTAGE ADJUSTMENT (ROUGH ALIGNMENT)

1. Receive the Monoscope signal.
2. Set 50% BRIGHTNESS and minimum PICTURE.
3. Turn the red VR on the focus pack all the way to the left and then gradually turn it to the right until the point where you can see the retrace line.
4. Next gradually turn it to the left to the position where the retrace line disappears.



Focus Pack

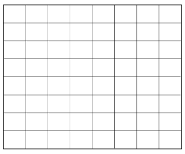
Fig. 4-1

4-2. SCREEN (G2) ADJUSTMENT

1. Turn on the power of the set.
2. Select VIDEO1 mode without signals.
3. Supply DC 175 ±0.5 V from external power supply to TP7103 (KR), TP7203 (KG) or TP7303 (KB) of CR board, CG board and CB board.
3. Adjust red, green and blue screen voltage to until retrace line disappears with screen VR on the focus pack.

4-3. FOCUS ROUGH ADJUSTMENT

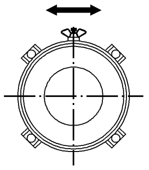
1. Loose the lens screw.
2. Set in the service mode. (Refer to SECTION 6.)
3. Place the caps on the red and blue lens so that only the green color is shown.
4. Press "①" or "④" button on the commander and select "PJE", press "⑥" three times on the Commander to display the test signal (crosshatch) on the screen.



Test signal

Fig. 4-2

5. Rotate the green lens and align to obtain the best lens focus at the center area.
6. Rotate the green focus VR on the focus pack and align to obtain the best electrical focus in the top right corner.
7. Perform the same alignment for red and blue lenses and electric focus.
8. Fix lens screw.



Lens

Fig. 4-3

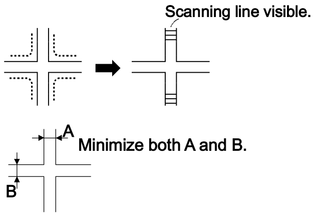
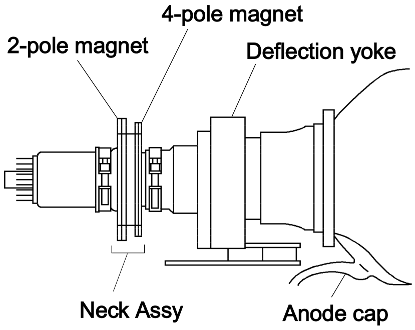


Fig. 4-4

4-4. DEFLECTION YOKE TILT ADJUSTMENT

1. Receive the Monoscope signal.
2. Place the caps on the red and blue lens so that only the green color.
3. Loosen the deflection yoke setscrew and align the tilt of the Deflection yoke so that the bars at the center of the monoscope pattern are horizontal.
4. After aligning the deflection yoke, fasten it securely to the funnel-shaped portion (neck) of the CRT.
5. The tilt of the deflection yoke for red and blue is aligned the same as was done for green.



Make sure deflection yoke is touching CRT closely.

Fig. 4-5

4-5. 2-POLE MAGNET ADJUSTMENT

1. Receive the Dot signal.
2. Place the caps on the red and blue lens so that only the green color is shown.
3. Turn the green focus VR on the focus pack to the right and set to over focus to enlarge the spot.
4. Now align the 2-Pole Magnet so that the enlarged spot is in the center of the just focus spot.
   (center of the dot doesn't move)
5. Align the green focus VR and set for just (precise) focus.
6. Perform the same alignment for red and blue.

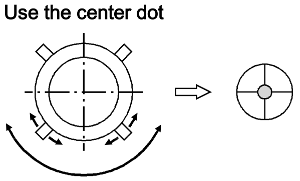


Fig. 4-6

4-6. 4-POLE MAGNET ADJUSTMENT

1. Receive the Dot signal.
2. Place the caps on the red and blue lens so that only the green color is shown.
3. Turn the green focus VR on the focus pack to the left and set to under focus to enlarge the spot.
4. Now align the 4-Pole Magnet so that the enlarged spot becomes a perfect circle.
5. Perform the same alignment for red and blue.

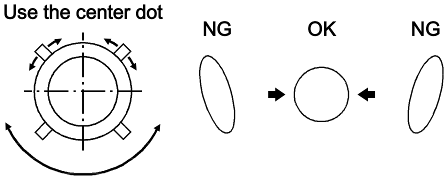


Fig. 4-7

4-7. GREEN, RED AND BLUE FOCUS ADJUSTMENT

4-7-1. Green, Red and Blue Lens Focus Adjustment

1. Receive the Monoscope signal.
2. Place the caps on the red and blue lens so that only the green color is shown.
3. Rotate the green lens and adjust to obtain the best lens focus at the center area.
4. Fix lens screw.
5. Repeat above process for red and blue.

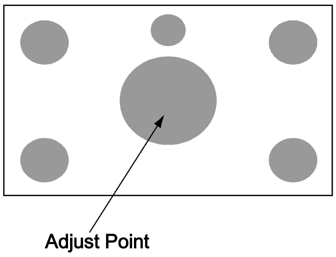


Fig. 4-8

4-7-2. Green, Red and Blue Electrical Focus Adjustment

1. Receive the Monoscope signal.
2. Place the caps on the red and blue lens so that only the green color is shown.
3. Rotate the green focus VR on the focus pack and adjust to obtain the best electrical focus in the adjust point.
4. Repeat above process for red and blue.
5. Repeat adjustment items 4-3. FOCUS ROUGH ADJUSTMENT, 4-5. 2-POLE MAGNET ADJUSTMENT, 4-6. 4-POLE MAGNET ADJUSTMENT and 4-7. GREEN, RED AND BLUE FOCUS ADJUSTMENT, and adjust to obtain the best focus.

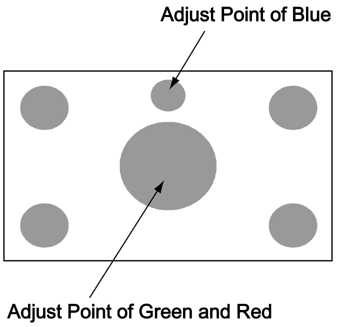


Fig. 4-9

SECTION 5
SAFETY RELATED ADJUSTMENT

When replacing the following components marked with ◪ on the schematic diagram, always check hold-down voltage and if necessary re-adjust.

Part Replaced (⧓)
R9901

Part Replaced (◪)	
D Board	C5117, C5123, C5127, C5143, D5115, D5204, Q5104, R5136, R5138, R5140, R9901, T5102, T5104, T5103 (FBT)
G Board	C6024, C6032, D6020

5-1. HV HOLD-DOWN ADJUSTMENT

1. Connect HV static voltmeter to HV Block.
2. Mount a resistor (R9901 : 43 kΩ, 1/4 W, METAL FILM) at CN5003.
3. Remove CN5002 and connect External Power Supply to CN5002 ① pin (+135 V) and ② pin (GND).
4. Turn on the set.

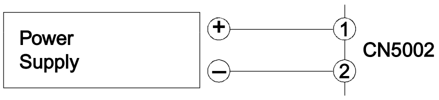
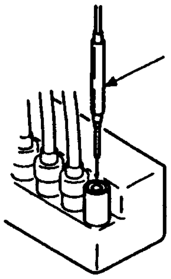


Fig. 5-1



Remove the cap off from the unused terminal and connect a HV static voltmeter there.

Fig. 5-2

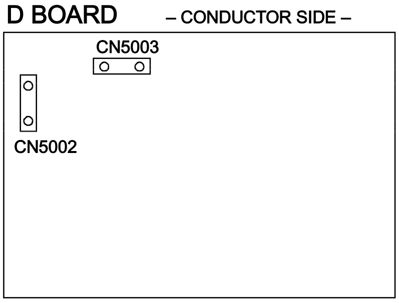


Fig. 5-3

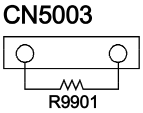


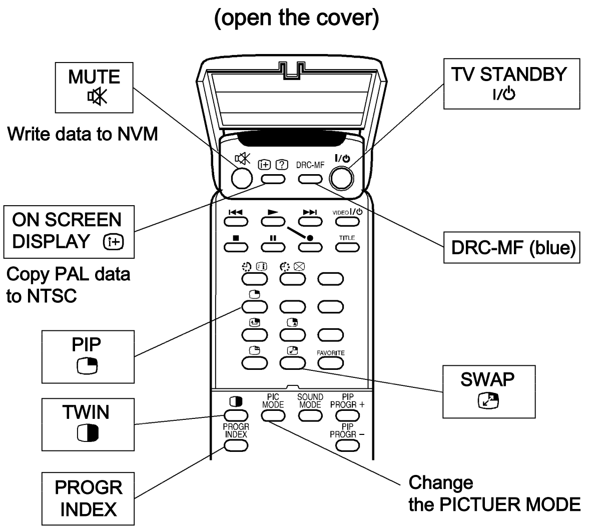
Fig. 5-4

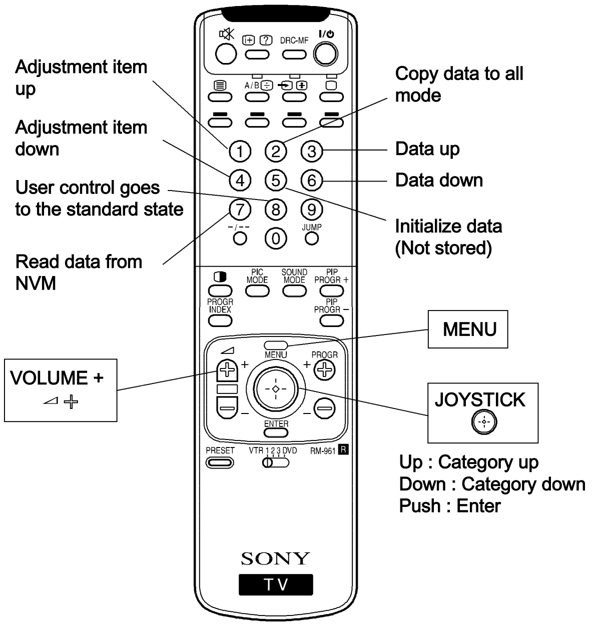
5. Receive the Dot signal and set PICTURE/BRIGHTNESS to minimum.
6. Slowly up the supply voltage from 0 V to 135 V until hold-down circuit works (picture disappear).
7. Read the HV static voltmeter of peak HV voltage.
   Spec : 33.7 ~ 35.3 kV
8. If Hold-down voltage is less than 33.7 kV then replace R9901 of 43 kΩ with that of 39 kΩ, and check if the voltage is within the spec.
9. If hold-down voltage is over than 35.3 kV then replace R9901 of 43 kΩ with that of 47 kΩ, and check if the voltage is within the spec.

SECTION 6
ELECTRICAL ADJUSTMENTS

6-1. ADJUSTMENTS WITH COMMANDER

Service adjustment to this model can performed with the supplied remote commander RM-961


(open the cover)
MUTE
Write data to NVM
TV STANDBY I/⏻
ON SCREEN DISPLAY
Copy PAL data to NTSC
DRC-MF (blue)
PIP
SWAP
TWIN
PROGR INDEX
Change the PICTUER MODE
DRC-MF
PIC MODE
SOUND MODE
PIP PROGR +
PIP PROGR −
FAVORITE
TITLE
VIDEO I/⏻


Adjustment item up
Adjustment item down
User control goes to the standard state
Read data from NVM
Copy data to all mode
Data up
Data down
Initialize data (Not stored)
MENU
VOLUME +
JOYSTICK
Up : Category up
Down : Category down
Push : Enter
DRC-MF
A/B
JUMP
PIC MODE
SOUND MODE
PIP PROGR +
PROGR INDEX
PIP PROGR −
MENU
PROGR
ENTER
PRESET
VTR 1 2 3 DVD
RM-961
SONY
TV

RM-961

6-1-1. How to Select Each Mode

The adjustment requires the following modes:

	50 Hz (PAL)	60 Hz (NTSC)	WIDE 60 Hz (NTSC)
DRC1250	○	○	○
DRC100	○	○	×
PIP	○	○	○
TWIN	○	○	×
INDEX	○	○	×

1. Selection of Mode Between 50 Hz and 60 Hz

50 Hz : Enter the PAL signal.
60 Hz : Enter the NTSC signal.
WIDE 60 Hz : Enter the NTSC signal with video input

2. Selection of DRC Mode

1) Press “DRC-MF (blue)” button on the commander, repeatedly until displays the mode that you want to select on the screen.

Note : The DRC-MF mode is not selectable when using the “PROGRAM INDEX” or “FAVORITE CH” feature, or when the “GAME MODE”, “PIP”, or “TWIN” mode is turned “ON”.

3. Selection of WIDE mode

The WIDE mode is selected only when the DRC1250 of NTSC signal with video input mode is active.

1) Enter the NTSC signal with video input.
2) Press “DRC-MF (blue)” button on the commander to select “DRC1250”.
3) Press “MENU” button on the commander and move “⊕” up or down to enter the “FEATURE” ➜ “WIDE MODE”.
4) Move “⊕” up or down to select “ON” or “OFF”, and push “⊕ (ENTER)” button.
5) Press “MENU” button to return to normal screen.

4. Selection of PIP mode

1) Open the remote control cover, press “❏ (PIP)” button on the commander.
2) Press “❏ (PIP)” button again to return to normal screen.

5. Selection of TWIN mode

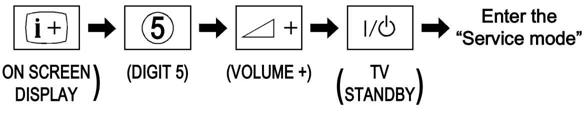
1) Press “◨ (TWIN)” button on the commander.
2) Press “◨ (TWIN)” button again to return to normal screen.

6. Selection of INDEX mode

1) Press “PROGR INDEX” button on the commander.
2) Press “PROGR INDEX” button again to return to normal screen.

6-1-2. How to Enter Service Mode

1. Turn on the main power switch to place this set in standby mode. (LED will light in red.)
2. Press the buttons on the commander as follows, and enter service mode.

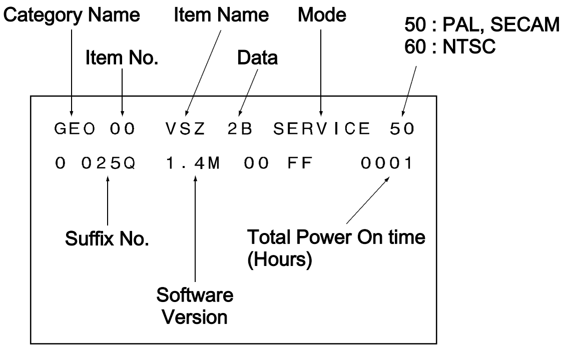

i+
⑤
◿ +
I/⏻
Enter the "Service mode"
(ON SCREEN DISPLAY)
(DIGIT 5)
(VOLUME +)
(TV STANDBY)

6-1-3. Method of Cancellation from Service Mode

1. Set the standby mode (Press "I/⏻ (TV STANDBY)" button on the commander), then press "I/⏻ (TV STANDBY)" button again, hereupon it becomes TV mode.

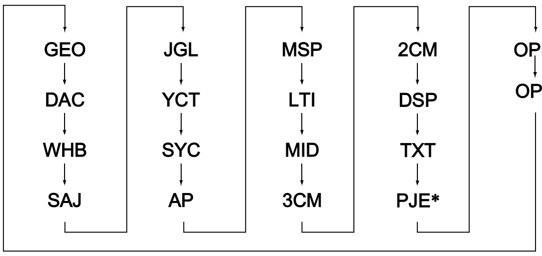
6-1-4. How to Adjustments

1. Set in the service mode, the following screen will appear.


Category Name
Item Name
Mode
50 : PAL, SECAM
60 : NTSC
Item No.
Data
GEO 00 VSZ 2B SERVICE 50
0 025Q 1.4M 00 FF 0001
Suffix No.
Total Power On time (Hours)
Software Version

2. Press "①" or "④" button on the commander to select the adjustment item.
3. Press "③" or "⑥" button on the commander to change the adjustment data.
4. Move "⊕" up or down to select the adjustment category.

   When move "⊕" up (category up), service mode changes in the order as shown below.


GEO
DAC
WHB
SAJ
JGL
YCT
SYC
AP
MSP
LTI
MID
3CM
2CM
DSP
TXT
PJE*
OPM
OPB

* : When it moves from PJE to other categrys, repeat ① or ④ button and press it.

6-1-5. How to Write the Data

1. Set in the service mode.
2. Press "①" or "④" button on the commander, select the adjustment item, and press "③" or "⑥" button to change the data.
3. Press "🔇 (MUTE)" button on the commander and it will indicate "WRITE" on the screen.
4. Press "⓪" button on the commander to write into memory. (The "WRITE" display will be changed to red color while executing, and back to "SERVICE".)

Commander Function (Except PJE mode)

Button	Mode	Description
🔇 + ⓪	WRITE	Writes data to NVM.
⑦ + ⓪	READ	Reads data from NVM.
⑧ + ⓪	NORMAL	All user control goes to the standard.
⑤ + ⓪	INITIAL	Service data initialization. Not stored. (Be sure not to use usually)
② + ⓪	COPY	Copies and writes data of DRC1250 (50Hz) mode to all other modes.
i+ + ⓪	WRT5060	Copies data of 50 Hz (PAL) mode to 60 Hz (NTSC) mode.

Note : Before changing to other modes, press "🔇 (MUTE)" + "⓪" buttons on the commander to write the data. (Omission of this operation causes the data to be returned to the data before adjustment.)

: Confirm the adjustment mode before writing data for data values because to vary in each adjustment mode.

: The adjustment item that there are no relations in the adjustment is not to change data values because all items are written in each adjustment mode.

6-1-6. Memory Write Confirmation Method

1. After adjustment, pull put the plug from AC outlet, and then plug into AC outlet again.
2. Turn the power switch ON and set in service mode.
3. Call the adjustment items again to confirm adjustments were made.

6-2. SERVICE LIST

Note

- Common : The data value of each mode commonness. Others are set up by each mode.
- ▨ : Shaded items are fixed data.
- ☐ : Though data value is indicated on the screen, it is not used.
- Standard data listed on the Adjustment Item Table are reference values, therefore it may be different for each model and for each mode.
- Note for Different Data :
  Those are the standard data values written on the microprocessor. Therefore, the data values of the modes and stored respectively in the memory.
  In case of a device replacement, adjustment by rewriting the data value is necessary for some items.

OPTION NOTE

Category : **OPM**
Item : **COM** Comb Operation Selection
00 = automatic operation (depends on color system status)
01 = no comb operation
02 = forced 2D-comb operation
03 = forced 3D-comb operation

Item : **TSY** TV System Selection for Auto TV System 00 = B/G, 01 = I, 10 = D/K, 11 = M

Item : **SSO** Speed CH Search Selection 00 = normal, 01 = 4 times, 10 = 6 times, 11 = 8 times

Item : **TRP** MPEG/JPEG Noise Reduction

Bit	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
Input	–	–	TV	Video 1	Video 2	Video 3	Video 4	DVD

Category : **OPB**

OP1	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
Item	TOP	NICAM	HDEV	(reserved)	–	DVD Input	AV Input	
Data	1	1	1	0	0	1	1	1

AV Input 00 = no AV Input 01 = 1 AV Input
10 = 3 AV Input 11 = 4 AV Input

OP2	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
Item	C-Text	Korean Stereo	Korean Mode	A-TVsys	US ST	SSV Mode	OSD Language	
Data	0	0	0	1	0	0	1	1

C-Text	Text Decoder Selection	0 = original,	1 = chinese
Korean Stereo*	Korean Stereo	0 = disabled,	1 = enabled
Video NTSC 3.58*	Video Color System	0 = Multi System,	1 = Single System
A-TVsys	Auto TV System in Auto Program	0 = disabled,	1 = enabled
US ST*	USA Stereo	0 = disabled,	1 = enabled
SSV Model	SSV-production Model	0 = original,	1 = disable PIP/TWIN/Digital
OSD Language	00 = English only,	01 = English & Chinese,	
	10 = English & Arabic/Korean*	11 = English, Chinese & Arabic/Korean*	

* : APPLICABLE FOR NTSC MODELS ONLY

V : WIDE (V-Compressed) mode

Category	Item		Function	Data Range	Standerd Data																Device Name
					50Hz (PAL)					60Hz (NTSC)							ECO Mode				
	No.	Name			DRC 1250	PIP	INDEX	TWIN	DRC 100	DRC 1250	DRC 1250 V	PIP	PIP V	INDEX	TWIN	DRC 100	ECO ON	ECO OFF	ECO ON V	ECO OFF V	
GEO	00	VSZ	V SIZE	00 ~ 3F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F					CXA2100AQ
	01	VPS	V POSITION	00 ~ 3F	23	23	1F	1F	23	1F	1F	1F	1F	1F	1F	1F					
	02	VLN	V LINEARITY	00 ~ 0F	07	07			07	07	07	07	07			07					
	03	SCO	S CORRECTION	00 ~ 0F	07	07			07	07	07	07	07			07					
	04	HSZ	H SIZE	00 ~ 3F	33	33	33	33	33	33	33	33	33	33	33	33					
	05	HPS	H POSITION	00 ~ 3F	37	37	37	37	37	37	37	37	37	37	37	37					
	06	DVH	H POSITION OFFSET FOR DVD	00 ~ 0F	09					07											
	07	PAP	PIN AMP	00 ~ 3F	22	22			22	22	22	22	22			22					
	08	UPN	UPPER CORNER PIN	00 ~ 3F	22	22	22	22	22	22	22	22	22	22	22	22					
	09	LPN	LOWER CORNER PIN	00 ~ 3F	22	22	22	22	22	22	22	22	22	22	22	22					
	0A	TRZ	TRAPEZIUM	00 ~ 0F	06	06	06	06	06	06	06	06	06	06	06	06					
	0B	AGL	AFC ANGLE	00 ~ 0F	07	07			07	07	07	07	07			07					
	0C	BOW	AFC BOW	00 ~ 0F	07	07			07	07	07	07	07			07					
	0D	LBL	LEFT H BLANKING	00 ~ 3F	34	34	34	34	34	34	34	34	34	34	34	34					
	0E	RBL	RIGHT H BLANKING	00 ~ 3F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F					
	0F	MPN	MIDDLE PIN DISTORTION COMPENSATION	00 ~ 03	00					00	00										
	10	UVL	UPPER V LINEARITY	00 ~ 0F	00					00											
	11	LVL	LOWER V LINEARITY	00 ~ 0F	00					00											
	12	HCP	HORIZONTAL HIGH VOLTAGE COMPENSATION	00 ~ 03	01					01	01										
	13	VCP	VERTICAL HIGH VOLTAGE COMPENSATION	00 ~ 03	00					00	00										
	14	VAS	V ASPECT	00 ~ 3F	2F	2F	2F	2F	2F	2F	2C	2F	2C	2F	2F	2F					
	15	VSC	V SCROLL	00 ~ 3F	1F	1F	1F	1F	1F	22	22	22	22	22	22	22					
	16	USC	UNDER-SCAN MODE ON/OFF	00, 01	00					00	01										
	17	VBW	V BLANKING WIDTH CONTROL	00 ~ 03	00	00			00	00	03	00	03			00					
	18	AT1	AKB REFERENCE TIMING	00 ~ 03	00	00			00	00	00	00	00			00					
	19	CPY	COPY THE GEO DATA TO ALL 50/60Hz NVM AREA	00, 01																	
DAC	00	HCT	H CENTER	00 ~ FF																	MB88141
	01	HLN	H LINEARITY	00 ~ 3F																	
	02	MDP	MIDDLE PIN	00 ~ 3F																	
	03	CCP	LOWER CORNER PIN	00 ~ 3F																	
	04	HTR	HORIZONTAL TRAPEZIUM	00 ~ 3F																	
	05	DF	DF ON/OFF SWITCH	00, 01																	
	06	DPH	DF PHASE	00 ~ 3F																	
	07	QPH	QP PHASE	00 ~ 3F																	
	08	QAC	QP AMPLITUDE	00 ~ 3F																	
	09	QDC	QP DC LEVEL	00 ~ 3F																	
	0A	QDV	QP V MODULATION	00 ~ 3F																	
	0B	QAV	QP AMPLITUDE MODULATION	00 ~ 3F																	
	0C	ABC	ABL D/A CONTROL	00 ~ FF													00	00	7E	7E	
	0D	CPY	COPY THE DAC DATA TO ALL 50/60Hz NVM AREA	00, 01	00																

Category	Item		Function	Data Range	Standerd Data	Device Name
	No.	Name			Common	
WHB	00	CBO	DC OFFSET CANCELLER FOR CB1	00 ~ 0F	0A	CXA2100AQ
	01	CRO	DC OFFSET CANCELLER FOR CR1	00 ~ 0F	0A	
	02	SBR	SUB BRIGHTNESS CONTROL	00 ~ 3F	25	
	03	RDR	R DRIVE	00 ~ 3F	29	
	04	GDR	G DRIVE	00 ~ 3F	29	
	05	BDR	B DRIVE	00 ~ 3F	29	
	06	RCT	R CUTOFF	00 ~ 3F	29	
	07	GCT	G CUTOFF	00 ~ 3F	1A	
	08	BCT	B CUTOFF	00 ~ 3F	29	
	09	SBO	SUB BRIGHTNESS OFFSET	00 ~ 3F	1F	
	0A	RDO	R DRIVE OFFSET	00 ~ 3F	1F	
	0B	GDO	G DRIVE OFFSET	00 ~ 3F	1F	
	0C	BDO	B DRIVE OFFSET	00 ~ 3F	1F	
	0D	RCO	R CUTOFF OFFSET	00 ~ 3F	1F	
	0E	GCO	G CUTOFF OFFSET	00 ~ 3F	1F	
	0F	BCO	B CUTOFF OFFSET	00 ~ 3F	1F	

V : WIDE (V-Compressed) mode

Category	Item		Function	Data Range	Standerd Data																	Device Name
					Common	50Hz (PAL)			60Hz (NTSC)			Twin	Index	Picture Mode				ECO Mode				
	No.	Name				TV	Video	DVD	TV	Video	DVD			Dynamic	Standard	Hi-Fine	Personal	ECO ON	ECO OFF	ECO ON V	ECO OFF V	
SAJ	00	PIC	PICTURE CONTROL	00 ~ 3F										3F	2C	1C						CXA2100AQ
	01	BRT	BRIGHTNESS CONTROL	00 ~ 3F										21	1F	1B						
	02	COL	COLOR CONTROL	00 ~ 3F										27	1F	1F						
	03	HUE	HUE CONTROL	00 ~ 3F										1F	1F	1F						
	04	SHP	SHARPNESS CONTROL	00 ~ 3F										22	1F	1D						
	05	VML	VM LEVEL	00 ~ 03										03	03	02	03					
	06	DYC	DYNAMIC COLOR ON/OFF	00, 01										01	01	00	01					
	07	CTM	COLOR TEMPERATURE FOR DYNAMIC COLOR	00, 01										00	00	00	00					
	08	CAX	COLOR MATRIX SPECIFICATION	00 ~ 03		02			00													
	09	GMA	GAMMA CORRECTION	00 ~ 03										03	03	03	03					
	0A	DCT	DC TRANSMISSION CONTROL	00 ~ 03										01	00	00	00					
	0B	DPL	AUTO PEDESTAL LEVEL CONTROL	00 ~ 03										02	01	00	01					
	0C	ABM	ABL MODE CONTROL	00 ~ 03										01	00	00	00					
	0D	ABT	ABL CURRENT DETECTION Vth CONTROL	00 ~ 03														02	00	02	00	
	0E	CLO	COLOR OFFSET	00 ~ 0F		07	07		0C	0C												
	0F	CLW	COLOR STEP WIDTH TO THE CHANGE OF S/N	00 ~ 07	01																	
	10	HUO	HUE OFFSET	00 ~ 0F		08	08		09	09												
	11	SHO	SHARPNESS OFFSET	00 ~ 1F		0F	0F	0F	0C	0F	0F											
	12	SHW	SHARPNESS STEP WIDTH TO THE CHANGE OF S/N	00 ~ 07	01																	
	13	PIO	PICTURE OFFSET FOR TWIN/INDEX	00 ~ 07								07	07									
	14	BRO	BRIGHTNESS OFFSET	00 ~ 0F														07	07	07	07	
JGL	00	PON	RGB AND AKB REFERENCE PULSE OUTPUT ON/OFF	00, 01	01																	CXA2100AQ
	01	RGB	RGB OUTPUT SELECTION	00 ~ 07	07																	
	02	AGG	AGING MODE SELECTION	00 ~ 03	00																	
	03	DPS	Y/C DELAY LINE PASS MODE SWITCH	00, 01	00																	
	04	BBT	RGB BOTTOM LIMITTER CONTROL	00 ~ 03	03																	
	05	LML	RGB AMPLITUDE LIMITTER CONTROL	00 ~ 03	00																	
	06	PAB	DC LEVEL FOR PEAK ABL	00 ~ 0F	0F																	
	07	SCO	SUB PICTURE CONTROL	00 ~ 0F	07																	
	08	LV2	RGB LEVEL FOR RGB2	00 ~ 0F	06																	
	09	SF0	SHARPNESS CIRCUIT F0	00, 01		01	01	01	01	01	01											
	0A	PRO	PRE/OVER-SHOOT RATIO CONTROL	00 ~ 03		00	03	03	03	03	03											
	0B	LTI	LUMINANCE TRANSIENT IMPROVEMENT	00 ~ 03										02	02	00	02					
	0C	CTI	CHROMINANCE TRANSIENT IMPROVEMENT	00 ~ 03										01	01	00	01					

Category	Item		Function	Data Range	Standerd Data											Device Name
					Common	2D Comb	3D Comb	S-Input	others	TV		Video		DVD		
	No.	Name								50Hz (PAL)	60Hz (NTSC)	50Hz (PAL)	60Hz (NTSC)	50Hz (PAL)	60Hz (NTSC)	
YCT	00	TNT	TINT ADJUSTMENT FOR NTSC	00 ~ 3F						24		1F				CXA2123Q
	01	PNG	PAL/NTSC GATE WIDTH	00, 01	01											
	02	PNI	PAL/NTSC SENSITIVITY SW	00, 01	00											
	03	SCL	SUB COLOR CONTROL	00 ~ 0F						07	07	07	07			
	04	SCT	SUB CONTRAST CONTROL	00 ~ 0F						08	07	08	07			
	05	SF0	SHARPNESS CENTER FREQUENCY CHANGING	00 ~ 03	02											
	06	SEQ	SHARPNESS EQUALIZER CHARACTERISTIC	00 ~ 03	03											
	07	SHG	SHARPNESS GAIN CONTROL	00 ~ 0F						05	06	05	06	05	05	
	08	YOL	Y-OUTPUT LEVEL CONTROL	00 ~ 3F	1F											
	09	BSP	BLACK STRETCH START POINT CHANGING	00 ~ 03	00											
	0A	COL	CB/CR OUTPUT LEVEL CONTROL	00 ~ 3F	1A											
	0B	DCR	DC RESTORATION RATIO ADJUSTMENT	00 ~ 03	00											
	0C	BF0	BPF/TQF F0 ADJUSTMENT	00 ~ 03	01											
	0D	BFQ	BPF/TQF Q ADJUSTMENT	00 ~ 03	02											
	0E	FSW	BPF/TQF SWITCH	00, 01	01											
	0F	SDT	SECAM DOUBLE TRAP SWITCH	00, 01	01											
	10	LPF	Y/CB/CR LPF SWITCH	00, 01	01											
	11	YDL	Y-DL TIME ADJUSTMENT	00 ~ 0F		06	05	05	03							
	12	CMT	CB/CR OUTPUT MUTE SWITCH	00, 01	00											
	13	BO1	CB OFFSET ADJUSTMENT (MAIN ROUTE)	00 ~ 0F	07											
	14	RO1	CR OFFSET ADJUSTMENT	00 ~ 0F	07											
	15	CDF	V COUNT DOWN FREQUENCY SWITCH	00 ~ 07	00											
	16	CDM	V COUNT DOWN JUDGE SWITCH	00 ~ 03	00											
	17	AFC	AFC SENSITIVITY SWITCH	00 ~ 03								00		00		
	18	MVM	MACROVISION MASK + AFC MASK	00, 01	00											
	19	SRY	SECAM R-Y BLACK ADJUSTMENT	00 ~ 0F	07											
	1A	SBY	SECAM B-Y BLACK ADJUSTMENT	00 ~ 0F	01											
	1B	BEL	SECAM BELL/HPF SWITCHING	00 ~ 03	02											
	1C	BLF	BELL F0 ADJUSTMENT	00, 01	00											
	1D	SVI	SECAM V-ID SWITCH	00, 01	00											
	1E	SGP	SECAM GATE POSITION ADJUSTMENT	00 ~ 03	00											
	1F	SID	SECAM SENSITIVITY SWITCH	00, 01	01											
	20	SIH	SECAM INHIBITION SWITCH	00, 01	00											
	21	STP	Y BLACK LEVEL SETUP FOR PAL PLUS	00, 01	00											
	22	HVC	H-VCO TEMPERATURE CHARACTER CANCELLING	00 ~ 03	02											
	23	3NR	3D NR OPERATION ON/OFF	00, 01	01											
	24	BW6	3D NR FOR 60Hz NON-BURST SIGNAL ON/OFF	00, 01	01											
	25	WSH	SHARPNESS GAIN STEP FOR NOISE REDUCTION	00 ~ 03	00											
	26	WCO	CB/CR OUTPUT LEVEL STEP FOR NOISE REDUCTION	00 ~ 03	00											

Category	Item		Function	Data Range	Standerd Data										Device Name
					Common	S-Input	Col Mode			TV		Video		DVD	
	No.	Name					SECAM	NTSC	PAL	50Hz (PAL)	60Hz (NTSC)	50Hz (PAL)	60Hz (NTSC)		
SYC	00	TNT	TINT ADJUSTMENT FOR NTSC	00 ~ 3F						21		20			CXA2123Q
	01	PNG	PAL/NTSC GATE WIDTH	00, 01	01										
	02	PNI	PAL/NTSC SENSITIVITY SW	00, 01	00										
	03	SCL	SUB COLOR CONTROL	00 ~ 0F						06	06	07	07		
	04	SCT	SUB CONTRAST CONTROL	00 ~ 0F						08	07	08	07		
	05	SF0	SHARPNESS CENTER FREQUENCY CHANGING	00 ~ 03	02										
	06	SEQ	SHARPNESS EQUALIZER CHARACTERISTIC	00 ~ 03	03										
	07	SHG	SHARPNESS GAIN CONTROL	00 ~ 0F	07										
	08	YOL	Y-OUTPUT LEVEL CONTROL	00 ~ 3F	1F										
	09	BSP	BLACK STRETCH START POINT CHANGING	00 ~ 03	00										
	0A	COL	CB/CR OUTPUT LEVEL CONTROL	00 ~ 3F	1A										
	0B	DCR	DC RESTORATION RATIO ADJUSTMENT	00 ~ 03	00										
	0C	BF0	BPF/TQF F0 ADJUSTMENT	00 ~ 03	01										
	0D	BFQ	BPF/TQF Q ADJUSTMENT	00 ~ 03	02										
	0E	FSW	BPF/TQF SWITCH	00, 01	01										
	0F	SDT	SECAM DOUBLE TRAP SWITCH	00, 01	01										
	10	LPF	Y/CB/CR LPF SWITCH	00, 01	01										
	11	YDL	Y-DL TIME ADJUSTMENT	00 ~ 0F		05	03	02	03						
	12	NCM	1-H ADDITION SWITCH	00, 01	01										
	13	CMT	CB/CR OUTPUT MUTE SWITCH	00, 01	00										
	14	BO1	CB OFFSET ADJUSTMENT (MAIN ROUTE)	00 ~ 0F	07										
	15	RO1	CR OFFSET ADJUSTMENT	00 ~ 0F	07										
	16	CDF	V COUNT DOWN FREQUENCY SWITCH	00 ~ 07	00										
	17	CDM	V COUNT DOWN JUDGE SWITCH	00 ~ 03	00							00		00	
	18	AFC	AFC SENSITIVITY SWITCH	00 ~ 03											
	19	MVM	MACROVISION MASK + AFC MASK	00, 01	00										
	1A	SRY	SECAM R-Y BLACK ADJUSTMENT	00 ~ 0F	07										
	1B	SBY	SECAM B-Y BLACK ADJUSTMENT	00 ~ 0F	01										
	1C	BEL	SECAM BELL/HPF SWITCHING	00 ~ 03	02										
	1D	BLF	BELL F0 ADJUSTMENT	00, 01	00										
	1E	SVI	SECAM V-ID SWITCH	00, 01	00										
	1F	SGP	SECAM GATE POSITION ADJUSTMENT	00 ~ 03	00										
	20	SID	SECAM SENSITIVITY SWITCH	00, 01	01										
	21	SIH	SECAM INHIBITION SWITCH	00, 01	00										
	22	STP	Y BLACK LEVEL SETUP FOR PAL PLUS	00, 01	00										
	23	HVC	H-VCO TEMPERATURE CHARACTER CANCELLING	00 ~ 03	02										

Category	Item		Function	Data Range	Standerd Data									Device Name
	No.	Name			Common	Sur VDD	Sur VDP	Sur TRS	Sur SIM	Sur OFF	Dynamic	Drama	Soft	
AP	00	BAS	BASS CONTROL	00 ~ 0F							0B	0A	07	TDA7315
	01	TRE	TREBLE CONTROL	00 ~ 0F							0A	09	07	
	02	LDN	LOUDNESS ON/OFF	00, 01	01									

Sur : Surround mode
VDD : Virtual Dolby Digital
VDP : Virtual Dolby Prologic
TRS : Tru Surround
SIM : Simulated

Category	Item		Function	Data Range	Standerd Data	Device Name
	No.	Name			Common	
MSP	00	WST	W/G STEREO THRESHOLD	00 ~ FF	15	MSP3415D
	01	WBT	W/G BILINGUAL THRESHOLD	00 ~ FF	EA	
	02	WLL	W/G MONAURAL THRESHOLD	00 ~ FF	05	
	03	WAC	W/G AGREEMENT COUNT	00 ~ 0F	01	
	04	WDL	W/G SEARCH DELAY	00 ~ FF	30	
	05	NDL	NICAM SEARCH DELAY	00 ~ FF	20	
	06	SDL	STEREO STATUS READ DELAY	00 ~ FF	10	
	07	AGC	AGC SWITCH AUTO/CONSTANT	00, 01	01	
	08	REL	AGC GAIN AT CONSTANT MODE	00 ~ 3F	28	
	09	CRM	CARRIER MUTING ON/OFF	00, 01	00	
	0A	ACO	AUDIO CLOCK OUT ON/OFF	00, 01	01	
	0B	FP	FM PRESCALE FOR NON-M SYSTEM	00 ~ 7F	1B	
	0C	FPM	FM PRESCALE FOR M SYSTEM	00 ~ 7F	32	
	0D	FH	FM PRESCALE FOR HDEV	00 ~ 7F	2D	
	0E	FHM	FM PRESCALE FOR HDEV AND M	00 ~ 7F	65	
	0F	WGP	W/G PRESCALE	00 ~ 7F	2A	
	10	NIP	NICAM PRESCALE	00 ~ 7F	6D	
	11	ERR	AUTO FM SWITCH THRESHOLD	00 ~ FF	50	
	12	VOL	LOUD SPEAKER GAIN 0700h to 07FFh	00 ~ FF	6D	

Category	Item		Function	Data Range	Standerd Data								Device Name
	No.	Name			Common	Twin	TV	Video	Picture Mode				
									Dynamic	Standard	Hi-Fine	Personal	
LTI	00	LDH	HISTOGRAM SEGMENT SELECTION	00, 01	01								TDA9178
	01	CFS	CONTOUR FILTER SELECTION	00, 01	01								
	02	WLB	LETTERBOX WINDOW SWITCH	00, 01	00								
	03	VDC	VIDEO DEPENDENT CORING	00, 01					01	01	01	01	
	04	DEM	DEMONSTRATION MODE	00, 01	00								
	05	CDP	LUMINANCE DELAY	00 ~ 07	04								
	06	OSP	OVERRULE SMART PEAKING	00, 01	00								
	07	WPO	WHITE POINT STRETCH OFF	00, 01	00								
	08	DSK	SKIN TONE SWITCH	00, 01					00	00	00	00	
	09	ASK	SKIN TONE ANGLE SELECTION	00, 01	00								
	0A	WSK	SKIN TONE WIDTH SELECTION	00, 01	00								
	0B	SSK	SKIN TONE SIZE SELECTION	00, 01	00								
	0C	DGR	GREEN ENHANCEMENT SWITCH	00, 01		00			✻	01	00	01	
	0D	DGT	THRESHOLD OF GREEN ENHANCEMENT SWITCH	00 ~ 07	07								
	0E	GGR	GREEN ENHANCEMENT GAIN	00, 01	00								
	0F	WGR	GREEN ENHANCEMENT WIDTH	00, 01	00								
	10	SGR	GREEN ENHANCEMENT SIZE	00, 01	00								
	11	DBL	BLUE STRETCH SWITCH	00, 01	00								
	12	GBL	BLUE STRETCH GAIN SELECTION	00, 01	00								
	13	SBL	BLUE STRETCH SIZE SELECTION	00, 01	00								
	14	CDS	COLOR DEPENDENT SHARPNESS	00, 01					01	01	01	01	
	15	CST	THRESHOLD OF COLOR DEPENDENT SHARPNESS	00 ~ 07	07								
	16	CTI	COLOR TRANSIENT IMPROVEMENT	00, 01					00	00	00	00	
	17	BON	BLACK OFFSET COMPENSATION	00, 01					00	00	00	00	
	18	BTD	ADAPTIVE BLACK STRETCH	00 ~ 3F					00	00	00	00	
	19	NLD	NON-LINEARITY AMPLIFIER	00 ~ 3F		00			13	13	05	13	
	1A	NLW	STEP WIDTH OF NON-LINEARITY AMPLIFIER	00 ~ 07	07								
	1B	VGD	VARIABLE GAMMA	00 ~ 3F		1F			15	15	1A	15	
	1C	VGW	STEP WIDTH OF VARIABLE GAMMA	00 ~ 07	00								
	1D	PKD	PEAKING AMPLITUDE	00 ~ 3F					32	32	1D	32	
	1E	PKW	STEP WIDTH OF PEAKING AMPLITUDE	00 ~ 0F	08								
	1F	SPD	STEEPNESS CORRECTION	00 ~ 3F					00	00	00	00	
	20	CRD	CORING LEVEL	00 ~ 3F					14	0D	05	14	
	21	CRW	STEP WIDTH OF CORING LEVEL	00 ~ 0F	09								
	22	CRO	CORING LEVEL OFFSET FOR VIDEO MODE	00 ~ 0F	05								
	23	LWD	LINE WIDTH CORRECTION	00 ~ 3F	1F								
	24	SNM	S/N MODE UNDER UNRELIABLE S/N CONDITION	00 ~ 07	00								
	25	SNC	S/N RATIO AVERAGE COUNTER	00 ~ 0F			03	03					
	26	FMC	FEATURE MODE MATCHING COUNTER	00 ~ 0F	02								

✻ Mark Data Value GE/HK/ME model: 01
AUS model: 00

Category	Item		Function	Data Range	Standerd Data										Device Name
					50 Hz (PAL)					60 Hz (NTSC)					
	No.	Name			DRC1250	PIP	TWIN	INDEX	DRC100	DRC1250	PIP	TWIN	INDEX	DRC100	
MID	00	HPH	HORIZONTAL ACTIVE DISPLAY AREA PHASE	00 ~ FF	3E	3E	7B	78	3E	49	49	6F	6C	49	MB94918
	01	VPH	VERTICAL ACTIVE DISPLAY AREA PHASE	00 ~ 3F	15	15	20	1A	0C	25	25	2E	2D	13	
	02	HSZ	HORIZONTAL ACTIVE DISPLAY AREA SIZE	00 ~ FF	7F	7F	7F	7F	7F	7F	7F	7F	7F	7F	
	03	VSZ	VERTICAL ACTIVE DISPLAY AREA SIZE	00 ~ FF	7F	7F	7F	7F	7F	7F	7F	7F	7F	7F	
	04	HPW	DISPLAY H-SYNC PULSE WIDTH	00 ~ 3F	3F	3F	3F	3F	3F	3F	3F	3F	3F	3F	
	05	VPW	DISPLAY V-SYNC PULSE WIDTH	00 ~ 07	03	03	03	03	03	03	03	03	03	03	
	06	YDL	DISPLAY OUTPUT Y/C DELAY CORRECTION	00 ~ 3F	00	00	00	00	00	00	00	00	00	00	
	07	MHP	MAIN PICTURE HORIZONTAL POSITION (SINGLE & PIP)	00 ~ FF	7F	7F			7F	7F	7F			7F	
	08	MVP	MAIN PICTURE VERTICAL POSITION (SINGLE & PIP)	00 ~ FF	7F	7F			7F	7F	7F			7F	
	09	MHS	MAIN PICTURE HORIZONTAL SIZE (SINGLE & PIP)	00 ~ FF	7F	7F			7F	7F	7F			7F	
	0A	MVS	MAIN PICTURE VERTICAL SIZE (SINGLE & PIP)	00 ~ FF	7F	7F			7F	7F	7F			7F	
	0B	PHP	PIP SUB PICTURE HORIZONTAL POSITION	00 ~ FF		6B					53				
	0C	PVP	PIP SUB PICTURE VERTICAL POSITION	00 ~ FF		5E					57				
	0D	PHS	PIP SUB PICTURE HORIZONTAL SIZE	00 ~ FF		7F					7F				
	0E	PVS	PIP SUB PICTURE VERTICAL SIZE	00 ~ FF		7F					7F				
	0F	PHO	PIP SUB PICTURE HORIZONTAL POSITION OFFSET	00 ~ FF		76					68				
	10	PVO	PIP SUB PICTURE VERTICAL POSITION OFFSET	00 ~ FF		6E					6B				
	11	TMP	TWIN MAIN PICTURE HORIZONTAL POSITION	00 ~ 03			01								
	12	TSP	TWIN SUB PICTURE HORIZONTAL POSITION	00 ~ FF			00								
	13	TVP	TWIN MAIN & SUB PICTURE VERTICAL POSITION	00 ~ FF											
	14	THS	TWIN MAIN & SUB PICTURE HORIZONTAL SIZE	00 ~ FF											
	15	TVS	TWIN MAIN & SUB PICTURE VERTICAL SIZE	00 ~ FF											
	16	THO	TWIN MAIN & SUB PICTURE HORIZONTAL POSITION OFFSET	00 ~ FF											
	17	TVO	TWIN MAIN & SUB PICTURE VERTICAL POSITION OFFSET	00 ~ FF											
	18	XHS	INDEX SUB PICTURE HORIZONTAL SIZE	00 ~ FF											
	19	XVS	INDEX SUB PICTURE VERTICAL SIZE	00 ~ FF											
	1A	XHG	INDEX HORIZONTAL GAP WIDTH BETWEEN PICTURES	00 ~ FF											
	1B	XVG	INDEX VERTICAL GAP WIDTH BETWEEN PICTURES	00 ~ FF											
	1C	XHP	INDEX 1st SUB PICTURE HORIZONTAL POSITION	00 ~ FF											
	1D	XVP	INDEX 1st SUB PICTURE VERTICAL POSITION	00 ~ FF											
	1E	DHP	DRC HORIZONTAL ACTIVE AREA POSITION	00 ~ FF	7F		7F		7F	7F		7F		7F	
	1F	DHS	DRC HORIZONTAL ACTIVE AREA PIXEL SIZE	00 ~ FF	7F		7F		7F	7F		7F		7F	
	20	DVP	DRC VERTICAL ACTIVE ARE LINE POSITION	00 ~ 3F	1A		3F		1A	1A		39		1A	
	21	DVS	DRC VERTICAL ACTIVE AREA LINE SIZE	00 ~ FF	7F		7F		7F	7F		7F		7F	
	22	VHP	VDO HORIZONTAL ACTIVE AREA POSITION	00 ~ FF		7F					7F				
	23	VHS	VDO HORIZONTAL ACTIVE AREA PIXEL SIZE	00 ~ FF		7F					7F				
	24	VEP	VDO VERTICAL ACTIVE AREA EVEN POSITION	00 ~ 3F		1E					1B				
	25	VVS	VDO VERTICAL ACTIVE AREA LINE SIZE	00 ~ FF		7F					7F				
	26	VOP	VDO VERTICAL ACTIVE AREA ODD POSITION	00 ~ 03		00					00				
	27	CLT	VDO CLAMP PULSE OUTPUT TIMING	00 ~ FF		7F					7F				
	28	CLW	VDO CLAMP PULSE WIDTH	00 ~ 07		04					04				
	29	VYD	VDO ANALOG INPUT Y/C DELAY CORRECTION	00 ~ 3F		00					00				
	2A	VCR	VDO CHROMA SIGNAL ORDER	00, 01		01					01				
	2B	VDI	VDO DIGITAL ANGLE INPUT SELECTION	00 ~ 03		01					01				

Category	Item		Function	Data Range	Standerd Data											Device Name
					Common	TV	Video	NR Mode				Picture Mode				
	No.	Name						NR Mode 0	NR Mode 1	NR Mode 2	NR Mode 3	Dynamic	Standard	Hi-Fine	Parsonal	
3CM	00	FRZ	EXTERNAL MEMORY TEST BIT	00, 01	00											µPD64082
	01	NRM	NOISE REDUCTION OPERATION MODE	00 ~ 03	00											
	02	YCO	Y/C SINGLE OUTPUT SELECTION	00 ~ 0F	0D											
	03	SYC	SYSTEM CLOCK SELECTION	00 ~ 03	01											
	04	STD	STANDARD/NON-STANDARD OPERATION SELECTION	00 ~ 03	00											
	05	MSS	INTER-FRAME/INTER-LINE OPERATION SELECTION	00 ~ 03	00											
	06	KIL	KILLER/NON-KILLER OPERATION SELECTION	00 ~ 03	03											
	07	EAD	EXTERNAL Y-ADC SWITCH	00, 01	00											
	08	ECS	EXTERNAL C-SYNC INPUT SELECTION	00 ~ 03	01											
	09	CPP	ADC INPUT LEVEL & CLUMP PULSE WIDTH SELECTION	00 ~ 03	02											
	0A	PWR	ADC INPUT WIDTH SWITCH	00, 01	00											
	0B	HDP	HORIZONTAL PHASE ADJUSTMENT	00 ~ 07	05											
	0C	CDL	C-SIGNAL DELAY ADJUSTMENT	00 ~ 07	04											
	0D	DYC	DY DETECTION CORING LEVEL ADJUSTMENT	00 ~ 0F				02	02	02	04					
	0E	DYG	DY DETECTION GAIN ADJUSTMENT	00 ~ 0F				0A	0A	0A	0A					
	0F	DCC	DC DETECTION CORING LEVEL ADJUSTMENT	00 ~ 0F				05	03	03	05					
	10	DCG	DC DETECTION GAIN ADJUSTMENT	00 ~ 0F				05	0A	0A	05					
	11	YNR	YNR NON-LINEAR FILTER SETUP	00 ~ 0F	01											
	12	CNR	CNR NON-LINEAR FILTER SETUP	00 ~ 0F	01											
	13	WSC	NOISE DETECTION CORING ADJUSTMENT	00 ~ 03	01											
	14	VTH	HYSTERESIS SELECTION FOR H-SYNC NON-STANDARD	00 ~ 03		01	01									
	15	VTR	SENSITIVITY SELECTION FOR H-SYNC NON-STANDARD	00 ~ 03		01	01									
	16	LDR	SENSITIVITY SELECTION FOR FRAME-SYNC NON-STANDARD	00 ~ 03		02	01									
	17	VAP	GAIN ADJUSTMENT FOR VERTICAL SHAPE CORRECTION	00 ~ 07								03	02	00	02	
	18	VAI	VANISHING ADJUSTMENT FOR VERTICAL SHAPE CORRECTION	00 ~ 1F								0C	06	00	06	
	19	TST	TEST BIT	00, 01	00											
	1A	YPF	CENTER FREQUENCY SELECTION FOR Y-PEAKING BPF	00 ~ 03								03	03	03	03	
	1B	YPG	GAIN ADJUSTMENT FOR Y-PEAKING BPF	00 ~ 0F								08	08	08	08	
	1C	VSE	LINE COMB FILTER SETUP	00 ~ 0F	0A											
	1D	CCN	C-SIGNAL SPLIT FILTER SWITCH	00, 01	00											
	1E	COS	C-SIGNAL DELAY SWITCH AT NOISE REDUCTION	00, 01	00											
	1F	SDC	DC DETECTION SENSITIVITY SWITCH	00, 01	00											

Category	Item		Function	Data Range	Standerd Data											Device Name
					Common	TV	Video	NR Mode				Picture Mode				
	No.	Name						NR Mode 0	NR Mode 1	NR Mode 2	NR Mode 3	Dynamic	Standard	Hi-Fine	Parsonal	
3CM	20	SDY	DY DETECTION LOWER-LEVEL SENSITIVITY SWITCH	00, 01	01											µPD64082
	21	D2G	D2 GAIN SELECTION	00 ~ 07	04											
	22	YHC	Y-SIGNAL HIGHER-LEVEL CORING SELECTION	00 ~ 03								00	00	00	00	
	23	YHG	Y-SIGNAL HIGHER-LEVEL GAIN SWITCH	00, 01								00	00	00	00	
	24	SHT	NON-STANDARD DETECTION & H/V COUNTER TEST BITS	00 ~ 0F	00											
	25	CLK	CLOCK TEST BITS	00 ~ 0F	08											
	26	PLL	PLL FILTER SETUP	00 ~ 0F	0D											
	27	KRF	KILLER DETECTION REFERENCE ADJUSTMENT	00 ~ 0F	03											
	28	HSL	H-SYNC SLICE LEVEL ADJUSTMENT	00 ~ 0F	0C											
	29	VSL	V-SYNC SLICE LEVEL ADJUSTMENT	00 ~ 0F	08											
	2A	BPS	INTERNAL BURST GATE START POSITION ADJUSTMENT	00 ~ 0F	04											
	2B	BPW	INTERNAL BURST GATE WIDTH ADJUSTMENT	00 ~ 0F	0A											
	2C	ADC	ADC CLOCK DELAY SELECTION	00 ~ 03	03											
	2D	APD	ADC POWER-DOWN SWITCH	00, 01	01											
	2E	NSD	NON-STANDARD DETECTION TEST BIT	00, 01	01											
	2F	SPD	MEMORY POWER-DOWN SWITCH	00 ~ 03	02											
	30	CNT	CNR TEST BIT	00, 01	00											
2CM	00	APA	2D COMB APACON ON/OFF	00, 01												CXA2069Q

Category	Item		Function	Data Range	Standerd Data									Device Name
	No.	Name			Common	Sur VDD	Sur VDP	Sur TRS	Sur SIM	Sur OFF	Dynamic	Drama	Soft	
DSP	00	DUL	DIR UNLOCK DETECTION MODE	00 ~ 03										
	01	DIM	DIGITAL INPUT MODE	00 ~ 03										
	02	TFM	TruSurround FRONT MINUS	00 ~ 7F										
	03	TFP	TruSurround FRONT PLUS	00 ~ 7F										
	04	TCE	TruSurround CENTER	00 ~ 7F										
	05	TS1	TruSurround SURROUND #1	00 ~ FF										
	06	TS2	TruSurround SURROUND #2	00 ~ 7F										
	07	TSP	TruSurround SURROUND PLUS	00 ~ 7F										
	08	TSM	TruSurround SURROUND MINUS	00 ~ 7F										
	09	LFE	LOW FREQUENCY EFFECT	00 ~ 7F										
	0A	BHL	BBE EFFECT 1 FOR BBE HIGH	00 ~ 7F										
	0B	BHH	BBE EFFECT 2 FOR BBE HIGH	00 ~ 7F										
	0C	BLL	BBE EFFECT 1 FOR BBE LOW	00 ~ 7F										
	0D	BLH	BBE EFFECT 2 FOR BBE LOW	00 ~ 7F										
	0E	DLR	DELAY SELECTION AT DSP RESET (100msec to 1500msec)	00 ~ 07										
	0F	BBE	BBE SELECTION	00 ~ 03										

Sur : Surround mode
VDD : Virtual Dolby Digital
VDP : Virtual Dolby Prologic
TRS : Tru Surround
SIM : Simulated

Category	Item		Function	Data Range	Standard Data			Device Name
	No.	Name			Common	50 Hz (PAL)	60 Hz (NTSC)	
TXT	00	TXH	TELETEXT HORIZONTAL POSITION	00 ~ FF	61			SAA5261
	01	TXV	TELETEXT VERTICAL POSITION	00 ~ 3F	0E			

Category : PJE

▨ : Fixed data

Item Number	Adjustment Item	Data Range	Standard Data					Name/Description
			DRC1250 (PAL)	DRC100 (PAL)	DRC1250 (NTSC)	DRC100 (NTSC)	DRC1250 VC (NTSC)	
00	FDIS	00,01	00					SELECT REGI DATA DISPLAY OF FINE ADJ
01	OSDH	01 ~ 255	32	32	32	32	32	PJED SERVICE MENU H POSITION
02	OSDV	01 ~ 255	75	55	75	55	65	PJED SERVICE MENU V POSITION
03	FVST	00 ~ 255	54	33	54	33	54	LINE NUMBER OF FINE ADJUST START
04	V1ST	00 ~ 255	00	00	00	00	00	V1 START DATA
05	V1CU	00 ~ 255	25	50	29	58	29	V1 COUNT UP DATA
06	COHP	00 ~ 255	00	00	00	00	00	H-PHASE OF ROUGH ADJ
07	FIHP	00 ~ 255	203	203	203	203	203	H-PHASE OF FINE ADJ
08	TPHP	00 ~ 255	51	51	51	51	51	H-PHASE OF TEST PATTERN
09	DFHP	00 ~ 255	00	00	00	00	00	H-PHASE OF DYNAMIC FOCUS
10	DFHG	–128 ~ 127	–80	–80	–80	–80	–80	H-2 GAIN OF DYNAMIC FOCUS
11	DFVG	–128 ~ 127	–30	–30	–30	–30	–30	V-2 GAIN OF DYNAMIC FOCUS
12	PWM1	00 ~ 255	00					PWM1
13	PWM2	00 ~ 255	29					H-PHASE OF AUTO REGI TEST PATTERN
14	HBLD	00 ~ 255	00					H-PHASE OF RETURNED BLUE V LINE
15	HBLW	00 ~ 63	00					PULSE WIDTH OF RETURNED BLUE V LINE
16	BLKP	00 ~ 255	44					START BLANK PULSE
17	COGV	–128 ~ 127	(*1)					GREEN V CENT OFFSET DATA OF AUTO REGI
18	CORV	–128 ~ 127	(*1)					RED V CENT OFFSET DATA OF AUTO REGI
19	COBV	–128 ~ 127	(*1)					BLUE V CENT OFFSET DATA OF AUTO REGI
20	COGH	–128 ~ 127	(*1)					GREEN H CENT OFFSET DATA OF AUTO REGI
21	CORH	–128 ~ 127	(*1)					RED H CENT OFFSET DATA OF AUTO REGI
22	COBH	–128 ~ 127	(*1)					BULE H CENT OFFSET DATA OF AUTO REGI
23	SOGV	–128 ~ 127	(*1)					GREEN V SKEW OFFSET DATA OF AUTO REGI
24	SORV	–128 ~ 127	(*1)					RED V SKEW OFFSET DATA OF AUTO REGI
25	SOBV	–128 ~ 127	(*1)					BLUE V SKEW OFFSET DATA OF AUTO REGI
26	SOGH	–128 ~ 127	(*1)					GREEN H SKEW OFFSET DATA OF AUTO REGI
27	SORH	–128 ~ 127	(*1)					RED H SKEW OFFSET DATA OF AUTO REGI
28	SOBH	–128 ~ 127	(*1)					BLUE H SKEW OFFSET DATA OF AUTO REGI
29	ERR	FIXED	00					AUTO REGI ERROR CODE
30	ADTM	00 ~ 255	144					TIMING TO GET A/D DATA OF AUTO REGI
31 *2	VUP	01 ~ 255	03	03	01	01	01	AUTO REGI PATTERN UPPER V POSITION
32 *2	VMID	01 ~ 255	135	130	115	110	115	AUTO REGI PATTERN MIDDLE V POSITION
33 *2	VLOW	01 ~ 255	260	255	225	212	225	AUTO REGI PATTERN LOWER V POSITION
34 *2	HPR	01 ~ 510	03	03	01	01	03	AUTO REGI PATTERN H POSITION
35	SFTF	00,01	00					SHIFT ENABLE 00 : DISABLE 01 : ENABLE
36	SFTE	00,01	00					SHIFT FAST 00 : NORMAL 01 : QUICK
37	ACTL	00 ~ 255	00					LOWER BYTE OF COUNTER VALUE
38	ACTH	00 ~ 255	00					HIGHER BYTE OF COUNTER VALUE
GRN	CENT	–512 ~ 511	000/000					GREEN H/V CENT (H CENT *3)
	SKEW	–512 ~ 511	000/000					GREEN H/V SKEW (H SKEW *3)
	SIZE	–512 ~ 511	000/–200					GREEN H/V SIZE (H/V SIZE *3)
	LIN	–512 ~ 511	xxxx/xxxx					GREEN H/V LIN
	KEY	–512 ~ 511	xxxx/xxxx					GREEN H/V KEY
	PIN	–512 ~ 511	xxxx/270					GREEN H/V PIN
BLU	CENT	–512 ~ 511	000/000					BLUE H/V CENT
	SKEW	–512 ~ 511	000/000					BLUE H/V SKEW
	SIZE	–512 ~ 511	000/–200					BLUE H/V SIZE
	LIN	–512 ~ 511	–150/xxxx					BLUE H/V LIN
	KEY	–512 ~ 511	xxxx/–70					BLUE H/V KEY
	PIN	–512 ~ 511	xxxx/270					BLUE H/V PIN
RED	CENT	–512 ~ 511	000/000					RED H/V CENT
	SKEW	–512 ~ 511	000/000					RED H/V SKEW
	SIZE	–512 ~ 511	000/–200					RED H/V SIZE
	LIN	–512 ~ 511	150/xxxx					RED H/V LIN
	KEY	–512 ~ 511	xxxx/–70					RED H/V KEY
	PIN	–512 ~ 511	xxxx/270					RED H/V PIN

VC : WIDE (V-Compressed) MODE
*1 : Set correctly by the automatic registration adjustment.
*2 : It can be adjust if automatic registration adjustment doesn't work.
*3 : It can be adjust Green a little.
xxxx : Cannot change.

Category	Item		Function	Data Range	Standard Data			Device Name
	No.	Name			Common	50 Hz (PAL)	60 Hz (NTSC)	
OPM	00	OSH	OSD H POSITION	00 ~ 3F	0F			CXP750096
	01	FW1	OSD ODD/EVEN FIELD WINDOW SETUP #1	00 ~ 3F	00			OPTION-MISC
	02	FW2	OSD ODD/EVEN FIELD WINDOW SETUP #2	00 ~ 3F	03			
	03	OHO	OSD H POSITION OFFSET FOR INDEX	00 ~ 0F	07			
	04	IL1	INDEX SUB-SCREEN OSD 1st LINE VERTICAL POSITION	00 ~ 3F		22	20	
	05	IVO	INDEX SUB-SCREEN OSD VERTICAL OFFSET	00 ~ 3F		2B	20	
	06	COM	COMB OPERATION SELECTION	00 ~ 03	00			
	07	APC	APC SWITCH	00, 01	01			
	08	TSY	TV SYSTEM SELECTION UNDER SEARCHING WITH AUTO TV SYSTEM	00 ~ 03	00			
	09	MUT	NO SIGNAL MUTE	00, 01	00			
	0A	AFM	AUTO FM SWITCH	00, 01	01			
	0B	TVO	V-ANGLE CORRECTION TO PICTURE ROTATION	00 ~ 07	03			
	0C	DBL	DISABLE BLUEBACK FUNCTION	00, 01	01			
	0D	SSO	SPEED CH SEARCH SELECTION	00 ~ 03	01			
	0E	TRP	MPEG/JPEG NOISE REDUCTION FOR EACH INPUT	00 ~ 3F	00			
	0F	SCH	CH SELECTION FOR SHIPPING CONDITION	00 ~ 7F				
	10	SCA	CABLE/AIR SELECTION FOR SHIPPING CONDITION	00, 01				
	11	DMG	DISABLE MENU-OPERATION GUIDE	00, 01	00			
	12	VSN	ENABLE NOISE REDUCTION IN VIDEO MODE	00, 01	00			
OPB	00	OP1	OPTIONAL BITS 1 (SEE THE SPECIFIED SHEET)	00 ~ FF	E7			OPTION-BITS
	01	OP2	OPTIONAL BITS 2 (SEE THE SPECIFIED SHEET)	00 ~ FF	13			

6-3. Picture Quality Adjustment

6-3-1. Preparation

1. Set in the service mode.
2. Set respective items as follows.

Adjustment Condition

DRC-MF : DRC1250
PICTURE MODE : HI-FINE
TWIN MODE : ON
ECO MODE : OFF
WIDE MODE : OFF

Category	Item	Data
SAJ	00 PIC	3F
	06 DYC	00
	0E CLO	06
	10 HUO	07
	13 PIO	00
JGL	04 BBT	00
	05 LML	03

3. Connect the oscilloscope probe to the following point on the E board.

Measurement Point

E Board CN4500 :
① pin R100 → VR
⑤ pin B100 → VB

Note : After the adjustment 6-3. Picture Quality Adjustment, these adjustment parameters must be recovered to the original condition.

Original Condition

DRC-MF : DRC1250
PICTURE MODE : HI-FINE
TWIN MODE : ON
ECO MODE : OFF
WIDE MODE : OFF

Category	Item	Data			
		50 TV	50 VIDEO	60 TV	60 VIDEO
SAJ	00 PIC	1F			
	06 DYC	00			
	0E CLO	0C	0C	0C	0C
	10 HUO	08	08	09	09
	13 PIO	07			
JGL	04 BBT	03			
	05 LML	00			

6-3-2. NTSC Video Input

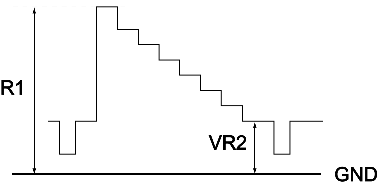
1. Enter the NTSC video color bar (White & color 75%) signal.
2. Enter the service mode, and set respective items as follows.
3. Measure waveform, and each item is adjusted to become the following figure.
4. Press "⧉ (SWAP)" button on the commander, when the left screen and the right screen are changed.
5. After adjustment finished, press "🔇 (MUTE)" + "⓪" button to write the data to the NVM.

(i) SUB CONTRAST

Condition :

Category	Item	Data
SAJ	00 PIC	3F
	02 COL	00
	13 PIO	00
JGL	01 RGB	04

Adjusting Parameter :
LEFT screen : YCT 08 YOL
RIGHT screen : SYC 08 YOL



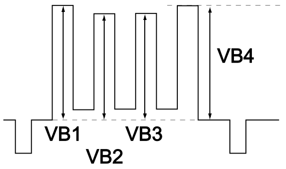
VR1 – VR2 = 1.85 ± 0.07 Vp-p

(ii) SUB HUE/SUB COL

Condition :

Category	Item	Data
SAJ	02 COL	1F
	10 HUO	07
JGL	01 RGB	07

Adjusting Parameter :
LEFT screen : YCT 0A COL
00 TNT
RIGHT screen : SYC 0A COL
00 TNT



VB1 = VB4 ± 70 mV
VB2 = VB3 ± 70 mV

6-3-3. NTSC RF Input

1. Enter the NTSC RF color bar (White & color 75%) signal.
2. Adjust with the same manner as 6-3-2. NTSC Video Input.

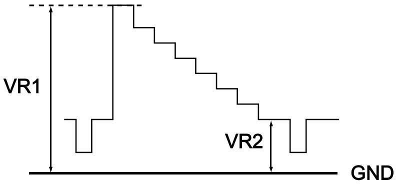
(i) SUB CONTRAST

Condition :

Category	Item		Data
SAJ	00	PIC	3F
	02	COL	00
JGL	01	RGB	04

Adjusting Parameter :

LEFT screen : YCT 04 SCT
RIGHT screen : SYC 04 SCT



VR1 – VR2 = 1.85 ± 0.07 Vp-p

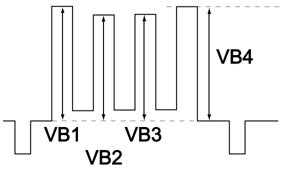
(ii) SUB HUE/SUB COL

Condition :

Category	Item		Data
SAJ	02	COL	1F
	10	HUO	07
JGL	01	RGB	07

Adjusting Parameter :

LEFT screen : YCT 03 SCL
00 TNT
RIGHT screen : SYC 03 SCL
00 TNT



VB1 = VB4 ± 70 mV
VB2 = VB3 ± 70 mV

6-3-4. PAL Video Input

1. Enter the PAL video color bar (White & color 75%) signal.
2. Adjust with the same manner as 6-3-2. NTSC Video Input.

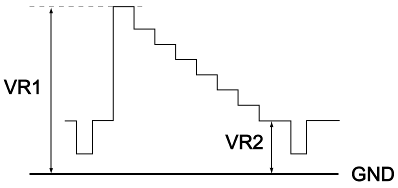
(i) SUB CONTRAST

Condition :

Category	Item		Data
SAJ	00	PIC	3F
	02	COL	00
JGL	01	RGB	04

Adjusting Parameter :

LEFT screen : YCT 04 SCT
RIGHT screen : SYC 00 SCT



VR1 – VR2 = 1.85 ± 0.07 Vp-p

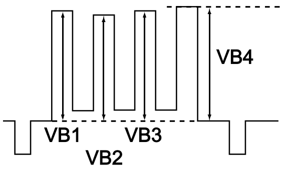
(ii) SUB HUE/SUB COL

Condition :

Category	Item		Data
SAJ	02	COL	1
JGL	01	RGB	07

Adjusting Parameter :

LEFT screen : YCT 03 SCL
RIGHT screen : SYC 03 SCL



VB1 = VB3 = VB4 ± 70 mV
VB2 = VB3 ± 70 mV

6-3-5. PAL RF Input

1. Enter the PAL RF color bar (White & color 75%) signal.
2. Adjust with the same manner as 6-3-2. NTSC Video Input.

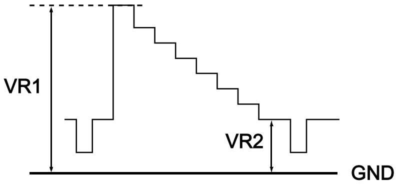
(i) SUB CONTRAST

Condition :

Category	Item	Data
SAJ	00 PIC	3F
	02 COL	00
JGL	01 RGB	04

Adjusting Parameter :

LEFT screen : YCT 04 SCT
RIGHT screen : SYC 04 SCT



VR1 – VR2 = 1.85 ± 0.07 Vp-p

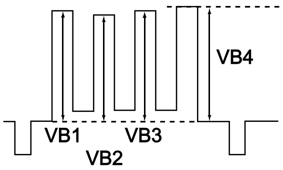
(ii) SUB HUE/SUB COL

Condition :

Category	Item	Data
SAJ	02 COL	1F
JGL	01 RGB	07

Adjusting Parameter :

LEFT screen : YCT 03 SCL
RIGHT screen : SYC 03 SCL



VB1 = VB3 = VB4 ± 70 mV
VB2 = VB3 ± 70 mV

6-4. Color Offset (53, 61 inch model only)

6-4-1. 50 Hz (PAL) TV Mode

1) Enter the PAL RF signal.
2) Enter the service mode, and write the following data to the NVM.

Category	Item	Data	
		53 inch	61 inch
SAJ	0E CLO	0A	0B

6-4-2. 50 Hz (PAL) Video Mode

1) Enter the PAL video signal.
2) Enter the service mode, and write the following data to the NVM.

Category	Item	Data	
		53 inch	61 inch
SAJ	0E CLO	09	0A

6-4-3. 60 Hz (NTSC) TV Mode

1) Enter the NTSC RF signal.
2) Enter the service mode, and write the following data to the NVM.

Category	Item	Data	
		53 inch	61 inch
SAJ	0E CLO	0A	0B

6-4-4. 60 Hz (NTSC) Video Mode

1) Enter the NTSC video signal.
2) Enter the service mode, and write the following data to the NVM.

Category	Item	Data	
		53 inch	61 inch
SAJ	0E CLO	0A	0B

6-5. REGISTRATION ADJUSTMENT

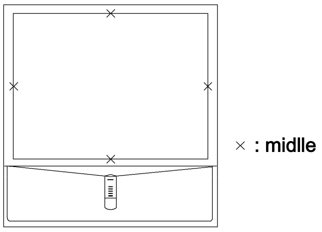
It is adjusted by REGISTRATION ADJUSTMENT respectively in the following 5 modes.

- DRC1250 (50 Hz) mode
- DRC100 (50 Hz) mode
- DRC1250 (60 Hz) mode
- DRC100 (60 Hz) mode
- DRC1250 (60 Hz) WIDE mode

6-5-1. Setup for Adjustment

1. Marking

1) At the 4 insides of the screen, locate the middle. Use a tape measure to identify the middle.



2. Data Setting

1) Set in the DRC1250 (50 Hz) mode.
2) Set in the Service mode, and select the category "PJE".
3) Press "⑦" + "⓪" button on the commander to read the data from NVM. Then all the default data are restored.
4) Change it to other 4 modes, and set the data with the respectively same process.

Note : When you replaced printed circuit boards or devices or CRTs, and when correction is drastically necessary, press "⑤" +"⓪" (PJE INITIAL) button to initialize the data in the PJE mode.

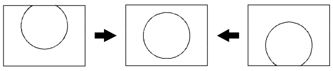
Press "🔇 (MUTE)" + "⓪" buttons on the commander to write the data.

: Be sure to set up the data in the PJE mode. All data initialize it when this operation is done by other categories.

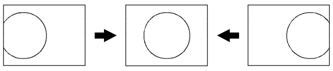
6-5-2. Method of Main Deflection Adjustment

1. Place the caps on the red and blue lenses so that only the green color is displayed.
2. Enter the signal.
3. Set in the Service mode, and select the category "GEO".
4. Adjust "01 VPS" and "05 HPS" so that the picture is displayed in the center of screen.

01 VPS

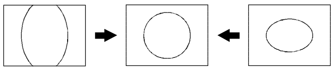


05 HPS

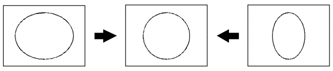


5. Adjust "00 VSZ" and "04 HSZ" so that the picture size is within the specification.

00 VSZ

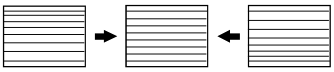


04 HSZ

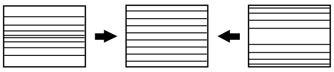


6. Adjust the following items so as to attain the optimum picture.

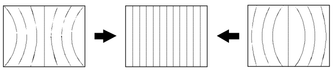
02 VLN



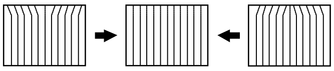
03 SCO



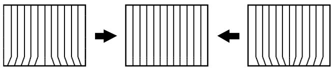
07 PAP



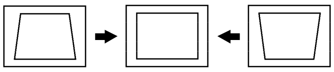
08 UPN



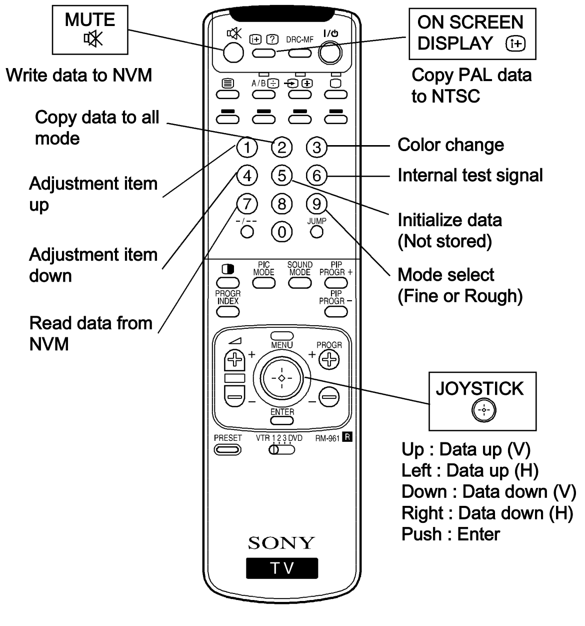
09 LPN



0A TRZ



6-5-3. Operation Method for Projector Engine (PJE) Mode


MUTE
Write data to NVM
Copy data to all mode
Adjustment item up
Adjustment item down
Read data from NVM
ON SCREEN DISPLAY
Copy PAL data to NTSC
Color change
Internal test signal
Initialize data (Not stored)
Mode select (Fine or Rough)
JOYSTICK
Up : Data up (V)
Left : Data up (H)
Down : Data down (V)
Right : Data down (H)
Push : Enter
SONY
TV

RM-961

1. Functions of Keys on Commander

- ① : Changes adjustment item. (item No. moves up)
  : Marker moves clockwise from center to outside. (in fine adjustment mode)
- ④ : Changes adjustment item. (item No. moves down)
  : Marker moves counterclockwise from outside to center. (in fine adjustment mode)
- ◎ (move) : Changes data value. (up, down, or to the left or right)
  : Marker moves up, down, or to the left or right. (in fine adjustment mode)
- ③ : Changes adjustment color. (except item No. 00~38) GRN → BLU → RED
- ⑥ : Displays or changes internal test signals.
  : crosshatch + external signal → dot + external signal → crosshatch only → dot only → off
- ⑨ : Switches adjustment mode. rough adjustment mode → fine adjustment mode
- ◎ (push) : Switches marker moving method. (in fine adjustment mode)

Commander Function (PJE mode)

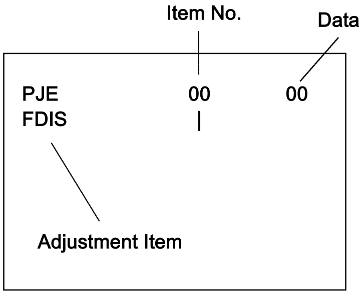
Button	Mode	Description
🔇 + ⓪	WRITE	Writes data to NVM.
⑦ + ⓪	READ	Reads data from NVM.
⑤ + ⓪	*PJE INITIAL	Service data initialization. Not stored. (Be sure not to use usually)
② + ⓪	*PJE COPY	Copies and writes data of DRC1250 (50Hz) mode to all other modes.
⊞ + ⓪	*PJE WRT5060	Copies data of 50 Hz (PAL) mode to 60 Hz (NTSC) mode.

* : only data in the PJE mode.

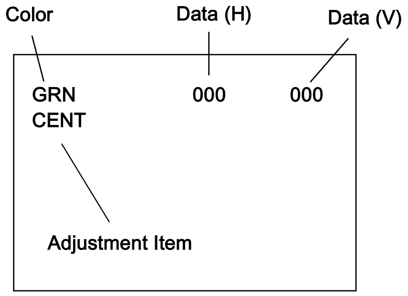
joystick key → ① and ④ buttons

2. Operation Method for Rough Adjustment

1) Set in the Service mode, and select the category "PJE".
2) Press "①" or "④" button on the commander to select the item, and move "◎" up, down, or to the left or right to change the data.


Item No.
Data
PJE
FDIS
00
00
Adjustment Item

3) Select item "GRN CENT". When BLU or RED is displayed, press "③" button on the commander to change the adjustment color in the order of GRN → BLU → RED.
4) In the GRN, BLU, or RED mode, move "◎" up or down to change the data in vertical direction, or move "◎" to the left or right to change the data in horizontal direction.

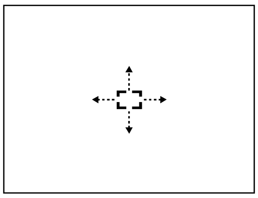

Color
Data (H)
Data (V)
GRN
CENT
000
000
Adjustment Item

5) When it moves from PJE to other categories, repeat "①" or "④" button and press it.

3. Operation Method for Fine Adjustment (in GRN, BLU, or RED Mode)

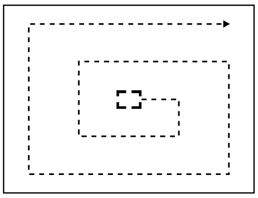
1) Set in the Service mode, and select the category “PJE”.
2) Select item “FDIS” so that the data at each position can be displayed in the fine adjustment mode, and set the data to “01”.
3) Press “⑨” button on the commander, and the fine adjustment mode will be active where a green marker appears in the center of screen (in the case of GRN mode).
4) Push “⊕ (ENTER)” button, and the marker color will be switched between green (GRN mode) and white alternately.
5) Use “①” or “④” button on the commander, or the joystick to move the marker to the position to be adjusted, where fine adjustment can be made.

- When marker color is white.
  (in this case, fine adjustment is disabled)



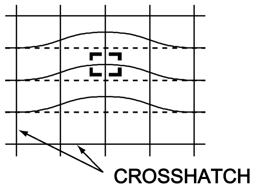
Operating the joystick can move the marker up, down, or to the left or right freely.

- When marker color is green. (GRN mode)

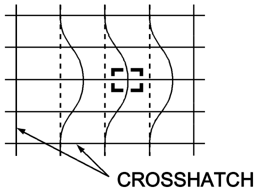


① : moves the marker clockwise from center to outside.
④ : moves the marker counterclockwise from outside to center.

- Fine adjustment can be made on the basis of marker position using joystick key.



Movement when joystick key is moved up.



Movement when joystic key is moved to the right.

6) Press “⑨” button on the commander to return to the rough adjustment mode.

6-5-4. Method of Projector Engine Adjustment (Sub Deflection Adjustment)

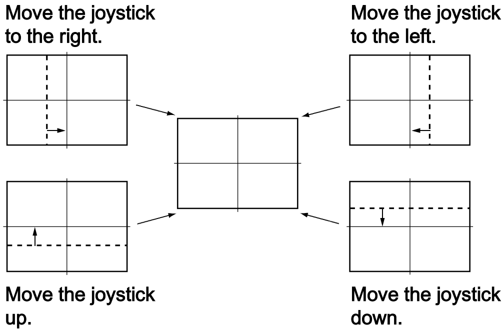
Adjustment ○ : Yes – : No

Adjustment Item	Adjustment Type		
	GRN	RED	BLU
	H / V	H / V	H / V
CENT	○ / ○	○ / ○	○ / ○
SKEW	○ / ○	○ / ○	○ / ○
SIZE	○ / ○	○ / ○	○ / ○
LIN	– / –	○ / –	○ / –
KEY	– / –	– / ○	– / ○
PIN	– / ○	– / ○	– / ○

1. Green Adjustment

1) Place the caps on the red and blue lenses so that only the green color is displayed.
2) Enter the signal.
3) Set in the Service mode, and select the category “PJE”.
4) Press “⑥” button on the commander to display internal test signal (crosshatch).
5) Select “GRN CENT”, and adjust so that the picture coincide in the center of screen.

• GRN CENT (horizontally/vertically)



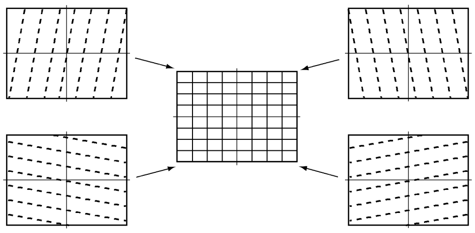
Move the joystick to the right.
Move the joystick to the left.
Move the joystick up.
Move the joystick down.

6) Select "GRN SKEW", and correct the tilt of horizontal lines and vertical lines.

- GRN SKEW (horizontally/vertically)

Move the joystick to the right.

Move the joystick to the left.



Move the joystick up.

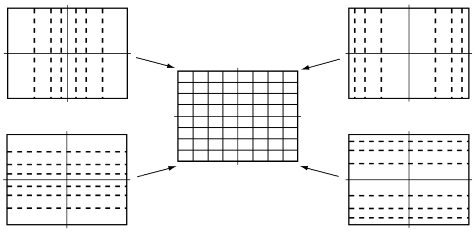
Move the joystick down.

7) Select "GRN SIZE", and adjust so that each distance from center to left end and to right end is equal. Adjust so that each distance from center to top and to bottom is equal.

- GRN SIZE (horizontally/vertically)

Move the joystick to the right.

Move the joystick to the left.

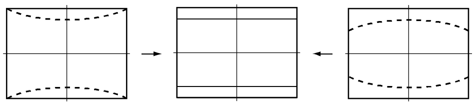


Move the joystick up.

Move the joystick down.

8) Select "GRN PIN", and adjust so that upper and lower horizontal lines on the screen become straight.

- GRN PIN (vertically)



Move the joystick up.

Move the joystick down.

9) Press "⑨" button on the commander to enter the fine adjustment mode.

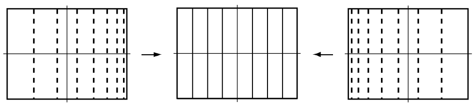
10) Make fine adjustment so that horizontal lines and vertical lines become straight.

11) Press "⑨" button on the commander to return to the rough adjustment mode.

2. Blue Adjustment

1) Place a cap on the red lens so that green and blue colors are displayed.
2) Press "③" button on the commander to select BLU mode.
3) Adjust the following items so that blue lines overlap with green lines.

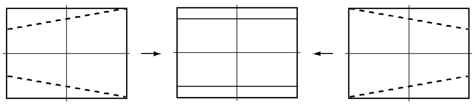
- BLU CENT (horizontally/vertically)
- BLU SKEW (horizontally/vertically)
- BLU SIZE (horizontally/vertically)
- BLU LIN (horizontally)
  Adjust so that each space at the right end and at the left end of screen is equal.



Move the joystick to the right.

Move the joystick to the left.

- BLU KEY (vertically)
  Adjust so that upper and lower horizontal lines on the screen become parallel.



Move the joystick up.

Move the joystick down.

- BLU PIN (vertically)

4) Press "⑨" button on the commander to enter the fine adjustment mode.
5) Make fine adjustment so that horizontal lines and vertical lines overlap with green lines.
6) Press "⑨" button on the commander to return to the rough adjustment mode.

3. Red Adjustment

1) Place a cap on the blue lens so that green and red colors are displayed.
2) Press "③" button on the commander to select RED mode.
3) Hereinafter, use same manner as that of blue adjustment to adjust so that the red lines overlap with green lines.

6-5-5. Deflection Adjustment

1. DRC1250 50 Hz (PAL) Mode

1) Enter the PAL SPCB signal, and set the DRC1250.
2) Set in the service mode, and write the following data to NVM.

Condition :

Category	Item	Data
GEO	0B AGL	07
	0C BOW	07
	15 VSC	1F
MID	00 HPH	3E
	01 VPH	15

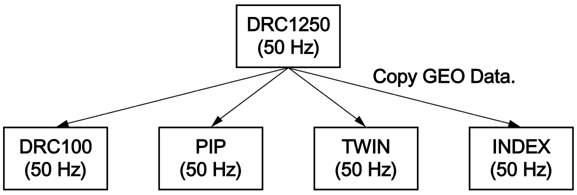
3) Adjust the main deflection. (Refer to 6-5-2.)

SPEC

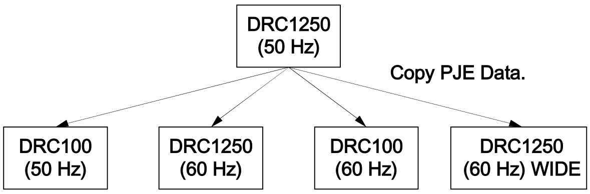
Overscan Spec. = 7.5%

Input Signal	H SIZE	V SIZE
PAL SPCB	16.6 ± 0.1 sq.	12.5 ± 0.1 sq.

4) After the Main Deflection Adjustment finished, press "🔇 (MUTE)"+"⓪" buttons on the commander to write the data to the NVM.
5) Select the category "GEO" and the item "19 CPY", and set the data to "01".
   Press "🔇 (MUTE)"+"⓪" buttons to copy GEO data to other 50 Hz modes



6) Adjust the sub deflection (Projector Engine Adjustment). (Refer to 6-5-3.)
7) After the Projector Engine Adjustment finished, press "🔇 (MUTE)"+"⓪" buttons on the commander to write the data to the NVM.
8) Press "②"+"⓪" buttons to copy PJE data to all other modes in the PJE mode.



2. DRC100 50 Hz (PAL) Mode

1) Enter the PAL SPCB signal, and set the DRC100.
2) Set in the service mode, and write the following data to NVM.

Condition :

Category	Item	Data
GEO	0B AGL	07
	0C BOW	07
	15 VSC	1F
MID	00 HPH	3E
	01 VPH	0C

3) Adjust the main deflection. (Refer to 6-5-2.)

SPEC

Overscan Spec. = 7.5%

Input Signal	H SIZE	V SIZE
PAL SPCB	16.6 ± 0.1 sq.	12.5 ± 0.1 sq.

4) After the Main Deflection Adjustment finished, press "🔇 (MUTE)"+"⓪" buttons on the commander to write the data to the NVM.
5) Adjust the sub deflection (Projector Engine Adjustment). (Refer to 6-5-3.)
6) After the Projector Engine Adjustment finished, press "🔇 (MUTE)"+"⓪" buttons on the commander to write the data to the NVM.

3. PIP 50 Hz (PAL) Mode

1) Enter the PAL SPCB signal, and set in the service mode.
2) Open the remote control cover, press "❐ (PIP)" button on the commander to set the PIP mode.
3) Confirm and set the following data.

Condition :

Category	Item		Data
GEO	00	VSZ	Same as DRC1250 50 Hz (PAL) mode
	01	VPS	
	02	VLN	
	03	SCO	
	04	HSZ	
	05	HPS	
	07	PAP	
	08	UPN	
	09	LPN	
	0A	TRZ	
	0B	AGL	07
	0C	BOW	07
	15	VSC	1F
MID	00	HPH	3E
	01	VPH	15

4) Press "🔇 (MUTE)"+"⓪" buttons on the commander to write the data to the NVM.

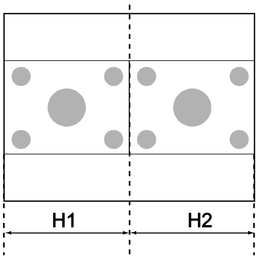
4. TWIN 50 Hz (PAL) Mode

1) Enter the PAL SPCB signal, and set in the service mode.
2) Press "◨ (TWIN)" button on the commander to set the TWIN mode.
3) Confirm and set the following data.

Condition :

Category	Item		Data
GEO	00	VSZ	Same as DRC1250 50 Hz (PAL) mode
	01	VPS	
	02	VLN	
	03	SCO	
	04	HSZ	
	05	HPS	
	07	PAP	
	08	UPN	
	09	LPN	
	0A	TRZ	
	0B	AGL	07
	0C	BOW	07
	15	VSC	1F
MID	00	HPH	7B
	01	VPH	20
	11	TMP	01
	12	TSP	00

4) Select the category "GEO" and the item "05 HPS", and adjust the horizontal position.



H1 – H2 = ± 0.1 sq.

5) Press "🔇 (MUTE)"+"⓪" buttons on the commander to write the data to the NVM.

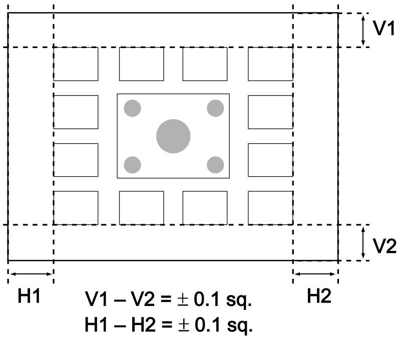
5. INDEX 50 Hz (PAL) Mode

1) Enter the PAL SPCB signal, and set in the service mode.
2) Press “PROGR INDEX” button on the commander to set the INDEX mode.
3) Confirm and set the following data.

Condition :

Category	Item		Data
GEO	00	VSZ	Same as DRC1250 50 Hz (PAL) mode
	01	VPS	
	02	VLN	
	03	SCO	
	04	HSZ	
	05	HPS	
	07	PAP	
	08	UPN	
	09	LPN	
	0A	TRZ	
	0B	AGL	07
	0C	BOW	07
	15	VSC	1F
MID	00	HPH	78
	01	VPH	1A

4) Select the category “GEO” and the item “05 HPS” to adjust the horizontal position, and select the item “01 VPS” to adjust the vertical position.



5) Press “🔇 (MUTE)”+“⓪” buttons on the commander to write the data to the NVM.

6. DRC1250 60 Hz (NTSC) Mode

1) Enter the NTSC monoscope signal, and set the DRC1250.
2) Set in the service mode, and write the following data to NVM.

Condition :

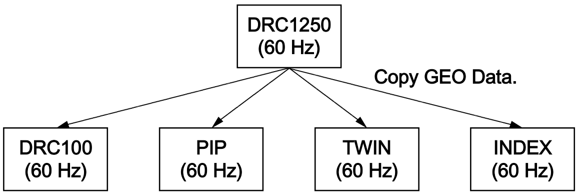
Category	Item		Data
GEO	0B	AGL	07
	0C	BOW	07
	15	VSC	22
MID	00	HPH	49
	01	VPH	25

3) Adjust the main deflection. (Refer to 6-5-2.)

SPEC Overscan Spec. = 7.5%

Input Signal	H SIZE	V SIZE
NTSC monoscope	15.7 ± 0.1 sq.	11.8 ± 0.1 sq.

4) After the Main Deflection Adjustment finished, press “🔇 (MUTE)”+“⓪” buttons on the commander to write the data to the NVM.
5) Select the category “GEO” and the item “19 CPY”, and set the data to “01”.
   Press “🔇 (MUTE)”+“⓪” buttons to copy GEO data to other 60 Hz modes



6) Adjust the sub deflection (Projector Engine Adjustment). (Refer to 6-5-3.)
7) After the Projector Engine Adjustment finished, press “🔇 (MUTE)”+“⓪” buttons on the commander to write the data to the NVM.

7. DRC100 60 Hz (NTSC) Mode

1) Enter the NTSC monoscope signal, and set the DRC100.
2) Set in the service mode, and write the following data to NVM.

Condition :

Category	Item		Data
GEO	0B	AGL	07
	0C	BOW	07
	15	VSC	22
MID	00	HPH	49
	01	VPH	13

3) Adjust the main deflection. (Refer to 6-5-2.)

SPEC

Overscan Spec. = 7.5%

Input Signal	H SIZE	V SIZE
NTSC monoscope	15.7 ± 0.1 sq.	11.8 ± 0.1 sq.

4) After the Main Deflection Adjustment finished, press "🔇 (MUTE)"+"⓪" buttons on the commander to write the data to the NVM.
5) Adjust the sub deflection (Projector Engine Adjustment). (Refer to 6-5-3.)
6) After the Projector Engine Adjustment finished, press "🔇 (MUTE)"+"⓪" buttons on the commander to write the data to the NVM.

8. PIP 60 Hz (NTSC) Mode

1) Enter the NTSC monoscope signal, and set in the service mode.
2) Open the remote control cover, press "❐ (PIP)" button on the commander to set the PIP mode.
3) Confirm and set the following data.

Condition :

Category	Item		Data
GEO	00	VSZ	Same as DRC1250 60 Hz (NTSC) mode
	01	VPS	
	02	VLN	
	03	SCO	
	04	HSZ	
	05	HPS	
	07	PAP	
	08	UPN	
	09	LPN	
	0A	TRZ	
	0B	AGL	07
	0C	BOW	07
	15	VSC	22
MID	00	HPH	49
	01	VPH	25

4) Press "🔇 (MUTE)"+"⓪" buttons on the commander to write the data to the NVM.

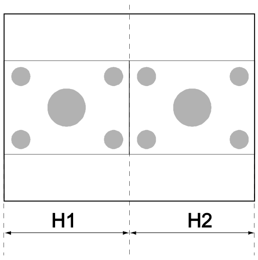
9. TWIN 60 Hz (NTSC) Mode

1) Enter the NTSC monoscope signal, and set in the service mode.
2) Press "◑ (TWIN)" button on the commander to set the TWIN mode.
3) Confirm and set the following data.

Condition :

Category	Item	Data
GEO	00 VSZ	Same as DRC1250 60 Hz (NTSC) mode
	01 VPS	
	02 VLN	
	03 SCO	
	04 HSZ	
	05 HPS	
	07 PAP	
	08 UPN	
	09 LPN	
	0A TRZ	
	0B AGL	07
	0C BOW	07
	15 VSC	22
MID	00 HPH	6F
	01 VPH	2E
	11 TMP	01
	12 TSP	00

4) Select the category "GEO" and the item "05 HPS", and adjust the horizontal position.



H1 – H2 = ± 0.1 sq.

5) Press "🔇 (MUTE)"+"⓪" buttons on the commander to write the data to the NVM.

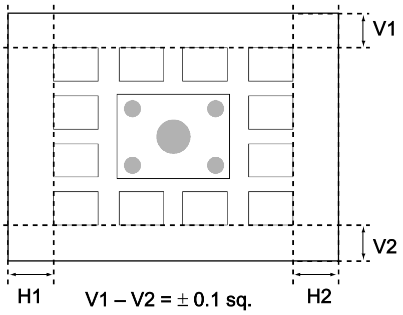
10.INDEX 60 Hz (NTSC) Mode

1) Enter the NTSC monoscope signal, and set in the service mode.
2) Press "PROGR INDEX" button on the commander to set the INDEX mode.
3) Confirm and set the following data.

Condition :

Category	Item	Data
GEO	00 VSZ	Same as DRC1250 60 Hz (NTSC) mode
	01 VPS	
	02 VLN	
	03 SCO	
	04 HSZ	
	05 HPS	
	07 PAP	
	08 UPN	
	09 LPN	
	0A TRZ	
	0B AGL	07
	0C BOW	07
	15 VSC	22
MID	00 HPH	6C
	01 VPH	2D

4) Select the category "GEO" and the item "05 HPS" to adjust the horizontal position, and select the item "01 VPS" to adjust the vertical position.



V1 – V2 = ± 0.1 sq.
H1 – H2 = ± 0.1 sq.

5) Press "🔇 (MUTE)"+"⓪" buttons on the commander to write the data to the NVM.

11.DRC1250 WIDE 60 Hz (NTSC) Mode

1) Enter the NTSC monoscope signal and set the DRC1250.
2) Press “MENU” button on the commander and move “⊕” up or down to enter the “FEATURE” ➔ “WIDE MODE”.
3) Select “WIDE MODE : ON”, and push “⊕ (ENTER)” button.
4) Press “MENU” button to return to service mode screen.
5) Set in the service mode and write the following data to NVM.

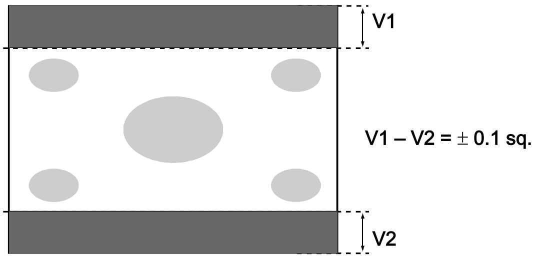
Condition :

Category	Item		Data
GEO	0B	AGL	07
	0C	BOW	07
	14	VAS	2C
	15	VSC	22
	16	USC	01
	17	VBW	03

3) Adjust the main deflection. (Refer to 6-5-2.)

SPEC

Input Signal	H SIZE
NTSC monoscope	15.7 ± 0.1 sq.



4) After the Main Deflection Adjustment finished, press “🔇 (MUTE)”+“⓪” buttons on the commander to write the data to the NVM.
5) Adjust the sub deflection (Projector Engine Adjustment). (Refer to 6-5-3.)
6) After the Projector Engine Adjustment finished, press “🔇 (MUTE)”+“⓪” buttons on the commander to write the data to the NVM.

12.PIP WIDE 60 Hz (NTSC) Mode

1) Enter the NTSC monoscope signal and set in the service mode.
2) Set the WIDE mode and open the remote control cover, press “❐ (PIP)” button on the commander to set the PIP mode.
3) Confirm and write the following data.

Condition :

Category	Item		Data
GEO	00	VSZ	Same as DRC1250 WIDE 60 Hz (NTSC) mode
	01	VPS	
	02	VLN	
	03	SCO	
	04	HSZ	
	05	HPS	
	07	PAP	
	08	UPN	
	09	LPN	
	0A	TRZ	
	0B	AGL	07
	0C	BOW	07
	14	VAS	2C
	15	VSC	22
	17	VBW	03

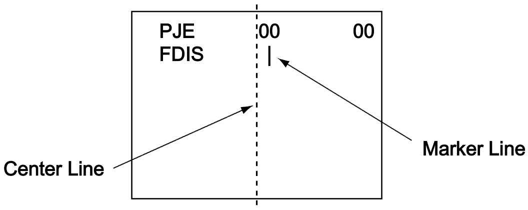
4) Press “🔇 (MUTE)”+“⓪” buttons on the commander to write the data to the NVM.

Note : Incase of replacing CRTs, adjust the set-up adjustments (items 4-1 to 4-7) and the registration adjustment (item 6-5).
In case of replacing two or three CRTs at the same time, replace and adjust one by one.

6-6. AUTO CONVERGENCE SETTING

This adjustment must be performed after the registration adjustment was made or after readjustment was made by any reason.

1. Darken the periphery of this set.
2. Enter the PAL SPCB signal, and set the DRC100 mode.
3. Set in the service mode, and select the category "PJE" and the item "PWM2".
4. Adjust "PWM2" so that the marker line is on monoscope center line.



5. Press "🔇 (MUTE)"+"⓪" buttons on the commander to write the data to the NVM.
6. Press "⊡ (AUTO CONVERGENCE)" button on the front panel of the set.
   (The offset value is now automatically stored.)
7. Check that no error message appears.
   If an error message appears, recheck. (Refer to 6-8.)
8. In the same manner, select DRC100 mode respectively, and press the "⊡ (AUTO CONVERGENCE)" button.
9. Enter the NTSC monoscope signal, and perform the same steps in the DRC1250, DRC100 and DRC1250 WIDE modes respectively.

6-7. WHITE BALANCE ADJUSTMENT

1. Enter the monoscope signal.
2. Set in the service mode.
3. Press "MENU" button on the commander to select "A/V CONTROL" ➧ "PICTURE MODE" ➧ "ADJUST".

Adjustment Condition

PICTURE MODE : PERSONAL
PICTURE : 0%
BRIGHT : 50%

If the noise of DCF (Digital Comb Filter) has an effecting white balance adjustment, change service data as follows while the adjustment.

OPM 06 COM : 00 → 01

(This time, beginning inspection also should be done under some condition.)

Adjusting Parameter

Category	Item	
WHB	02	SBR
	03	RDR
	05	BDR
	06	RCT
	08	BCT

4. Adjust "02 SBR" so that 10 IRE section barely grows.
3. Enter the all-white pattern signal.
6. Adjust "06 RCT" and "08 BCT" so as to attain the optimum white balance.
7. Adjust "02 SBR" so that 100 IRE section barely grows.
8. Adjust "03 RDR" and "05 BDR" so as to attain the optimum white balance.
9. Repeatedly adjust the white balance for the minimum and maximum picture setting.
10. Enter the monoscope signal, and select "SAJ 00 PIC", and set the data to "00".
11. Adjust "02 SBR" so that the border between 0 IRE and 10 IRE becomes distinct.

6-8. AUTO CONVERGENCE ERROR CODE LIST

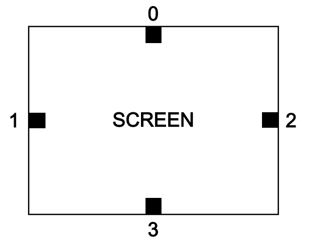
If an error code is displayed after the set has been fully adjusted, correctly, plese check the following items : position, tilt and sizing. If either of these adjustments are off, even slightli, the auto registration pattern will not hit the four sensors properly. This occurs when the internal generator patterns is being flashed on the screen for the sensor to read. Therefore, auto registration (called auto convergence) cannot operate properly causing an error code to be displayed. In order for this function to operate properly, correct position, tilt and size must be adjusted properly.

ERROR CODE LIST

ERROR CODE	DESCRIPTION	NOTE
00	No Error	
10	Sensor Input Level Low	* Check wiring, beam position, sensor. 0 : Upper Center 1 : Middle Left 2 : Middle Right 3 : Lower Center
20	Sensor Input Level High	* Check OP-Amp circuit. 0 : Upper Center 1 : Middle Left 2 : Middle Right 3 : Lower Center
30	Loop Limit Over	* Check the registration information on the convergence board.
40	Regi Data Overflow	* Check the convergence yoke driver ICs.
50	Regi Data Overdraw	
60	Offset Data Overflow	* Convergence patterns displayed are out of normal range.
70	Offset Data Overdraw	

* : In case of multiple error, last error is displayed.

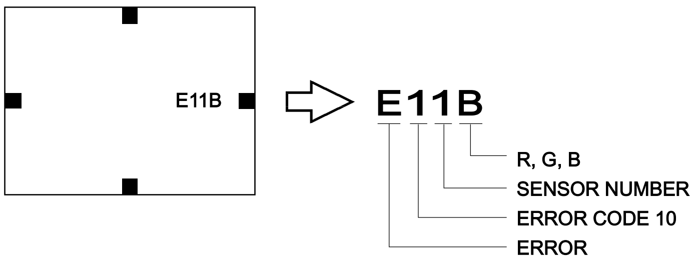
[SENSOR POSITION]



0 : UPPER SENSOR
1 : LEFT SENSOR
2 : RIGHT SENSOR
3 : LOWER SENSOR

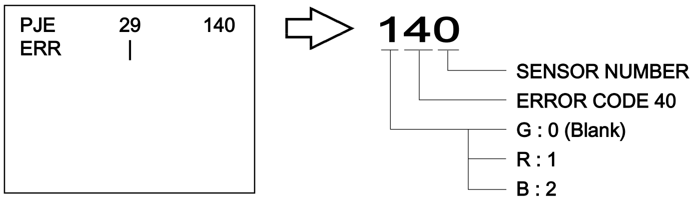
• ERROR CODE SCREEN DISPLAY

(When press "⊞ (AUTO CONVERGENCE)" button.)



• ERROR CODE SCREEN DISPLAY

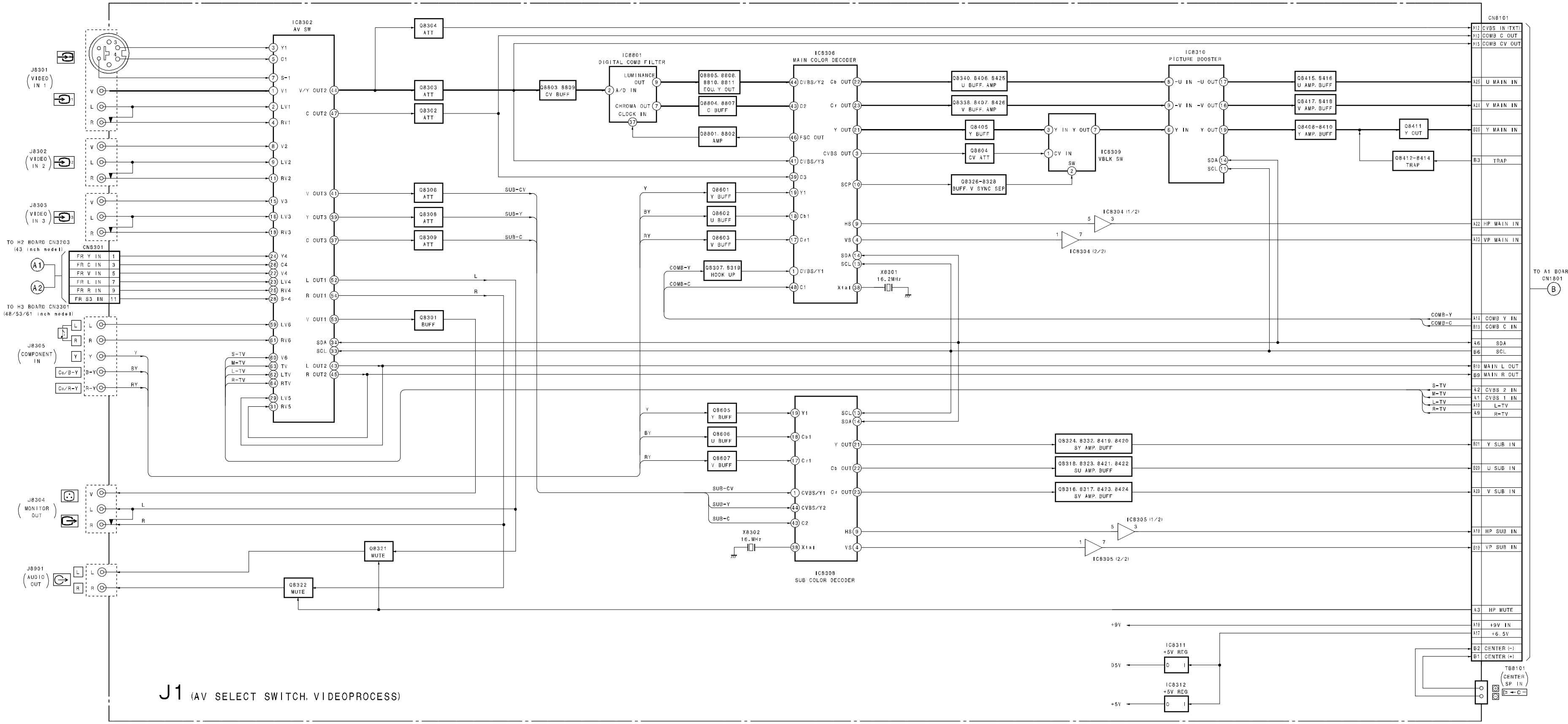
(When select "PJE" ➧ "29 ERR".)



Category : PJE
Item : 29 ERR

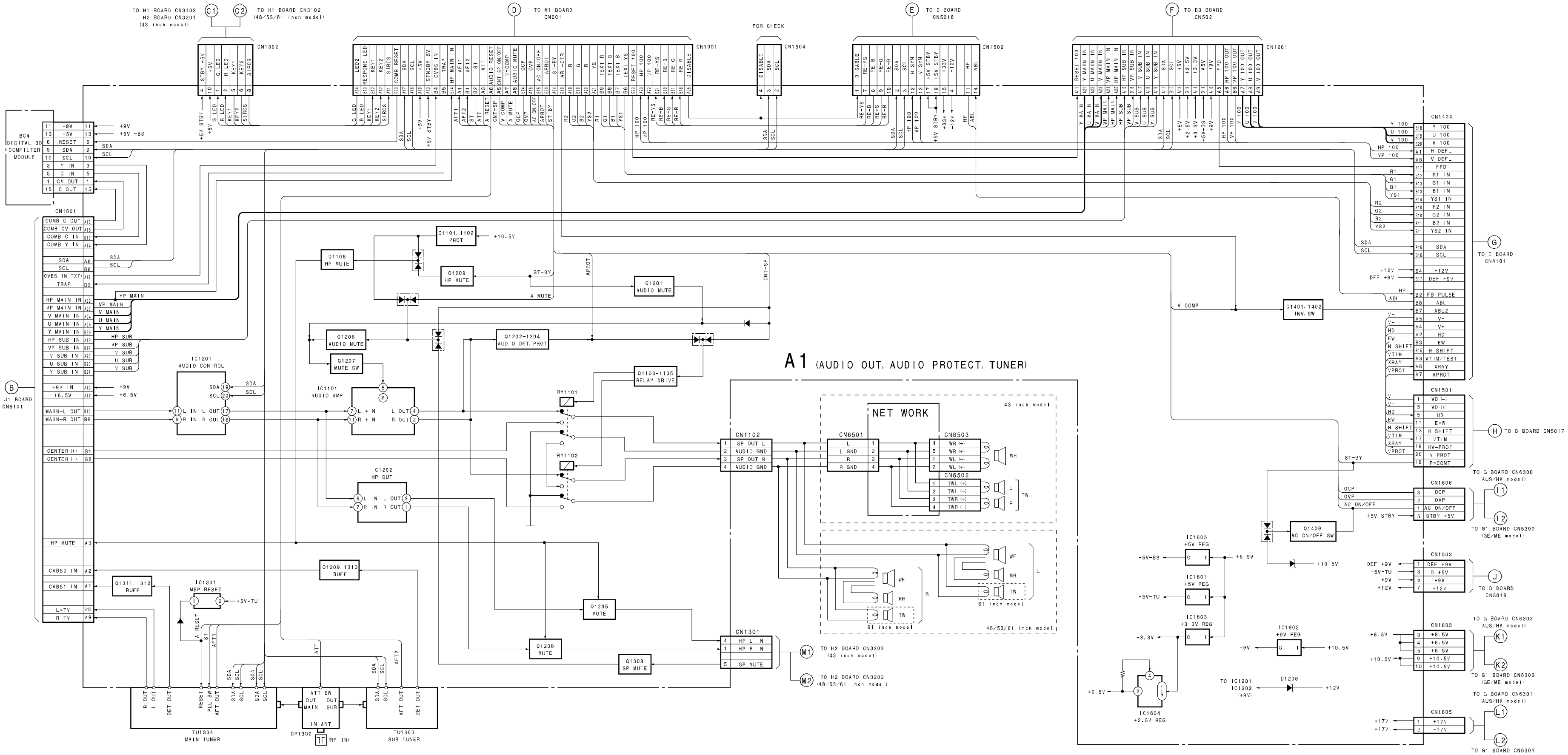
SECTION 7
DIAGRAMS

7-1. BLOCK DIAGRAMS

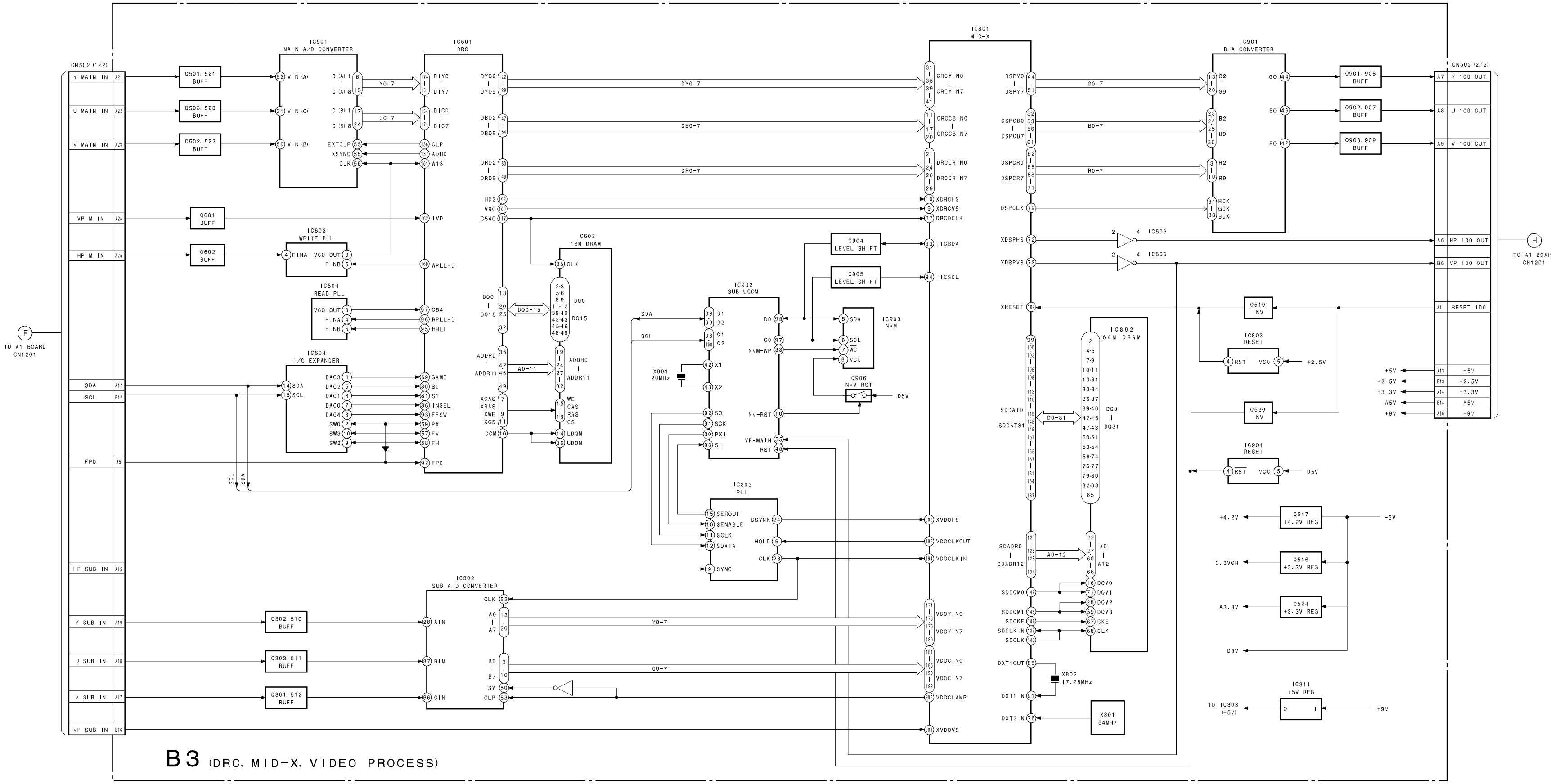

J8301 (VIDEO IN 1)
J8302 (VIDEO IN 2)
J8303 (VIDEO IN 3)
TO H2 BOARD CN3203 (43 inch model)
TO H3 BOARD CN3301 (48/53/61 inch model)
A1
A2
CN8301
FR Y IN 1
FR C IN 3
FR V IN 5
FR L IN 7
FR R IN 9
FR S3 IN 11
J8305 (COMPONENT IN)
Y
CB/B-Y
CR/R-Y
B-Y
R-Y
BY
RY
V
L
R
J8304 (MONITOR OUT)
J8901 (AUDIO OUT)
IC8302 AV SW
Y1
C1
S-1
V1
LV1
RV1
V2
LV2
RV2
V3
LV3
RV3
Y4
C4
V4
LV4
RV4
S-4
LV6
RV6
V6
TV
LTV
RTV
LV5
RV5
S-TV
M-TV
L-TV
R-TV
V/Y OUT2
C OUT2
V OUT3
Y OUT3
C OUT3
L OUT1
R OUT1
V OUT1
SDA
SCL
L OUT2
R OUT2
Q8304 ATT
Q8303 ATT
Q8302 ATT
Q8306 ATT
Q8308 ATT
Q8309 ATT
Q8301 BUFF
Q8321 MUTE
Q8322 MUTE
SUB-CV
SUB-Y
SUB-C
Q8803, 8809 CV BUFF
IC8801 DIGITAL COMB FILTER
A/D IN
LUMINANCE OUT
CHROMA OUT
CLOCK IN
Q8805, 8808, 8810, 8811 EQU, Y OUT
Q8804, 8807 C BUFF
Q8801, 8802 AMP
IC8306 MAIN COLOR DECODER
CVBS/Y2
C2
FSC OUT
CVBS/Y3
C3
Y1
Cb1
Cr1
CVBS/Y1
C1
Cb OUT
Cr OUT
Y OUT
CVBS OUT
SCP
HS
VS
Xtal
X8301 16.2MHz
Q8601 Y BUFF
Q8602 U BUFF
Q8603 V BUFF
COMB-Y
COMB-C
Q8307, 8319 HOOK UP
Q8340, 8406, 8425 U BUFF, AMP
Q8338, 8407, 8426 V BUFF, AMP
Q8405 Y BUFF
Q8604 CV ATT
Q8326-8328 BUFF, V SYNC SEP
IC8309 VBLK SW
Y IN
CV IN
SW
IC8304 (1/2)
IC8304 (2/2)
IC8310 PICTURE BOOSTER
-U IN
-U OUT
-V IN
-V OUT
Y IN
Y OUT
Q8415, 8416 U AMP, BUFF
Q8417, 8418 V AMP, BUFF
Q8408-8410 Y AMP, BUFF
Q8411 Y OUT
Q8412-8414 TRAP
Q8605 Y BUFF
Q8606 U BUFF
Q8607 V BUFF
IC8308 SUB COLOR DECODER
X8302 16.MHz
Q8324, 8332, 8419, 8420 SY AMP, BUFF
Q8318, 8323, 8421, 8422 SU AMP, BUFF
Q8316, 8317, 8423, 8424 SV AMP, BUFF
IC8305 (1/2)
IC8305 (2/2)
+9V
D5V
+5V
IC8311 +5V REG
IC8312 +5V REG
CN8101
A12 CVBS IN (TXT)
A13 COMB C OUT
A15 COMB CV OUT
A25 U MAIN IN
A24 V MAIN IN
B25 Y MAIN IN
B3 TRAP
A22 HP MAIN IN
A23 VP MAIN IN
A14 COMB Y IN
B13 COMB C IN
A6 SDA
B6 SCL
B10 MAIN L OUT
B9 MAIN R OUT
A2 CVBS 2 IN
A1 CVBS 1 IN
A10 L-TV
A9 R-TV
B21 Y SUB IN
B20 U SUB IN
A20 V SUB IN
A19 HP SUB IN
B19 VP SUB IN
A3 HP MUTE
A18 +9V IN
A17 +6.5V
B2 CENTER (–)
B1 CENTER (+)
TO A1 BOARD CN1801
B
TB8101 (CENTER SP IN)

J1 (AV SELECT SWITCH, VIDEOPROCESS)

A1 (AUDIO OUT, AUDIO PROTECT, TUNER)

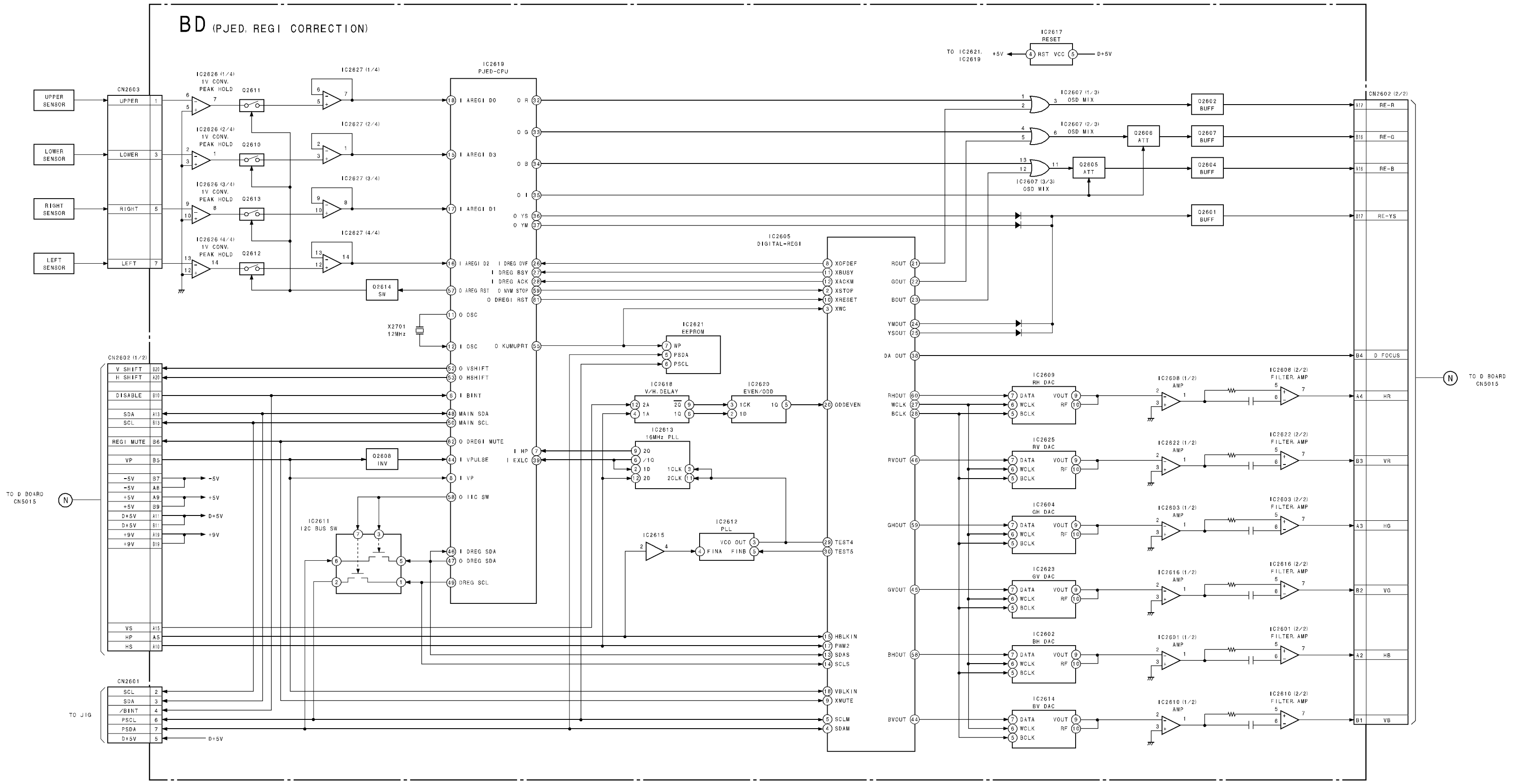


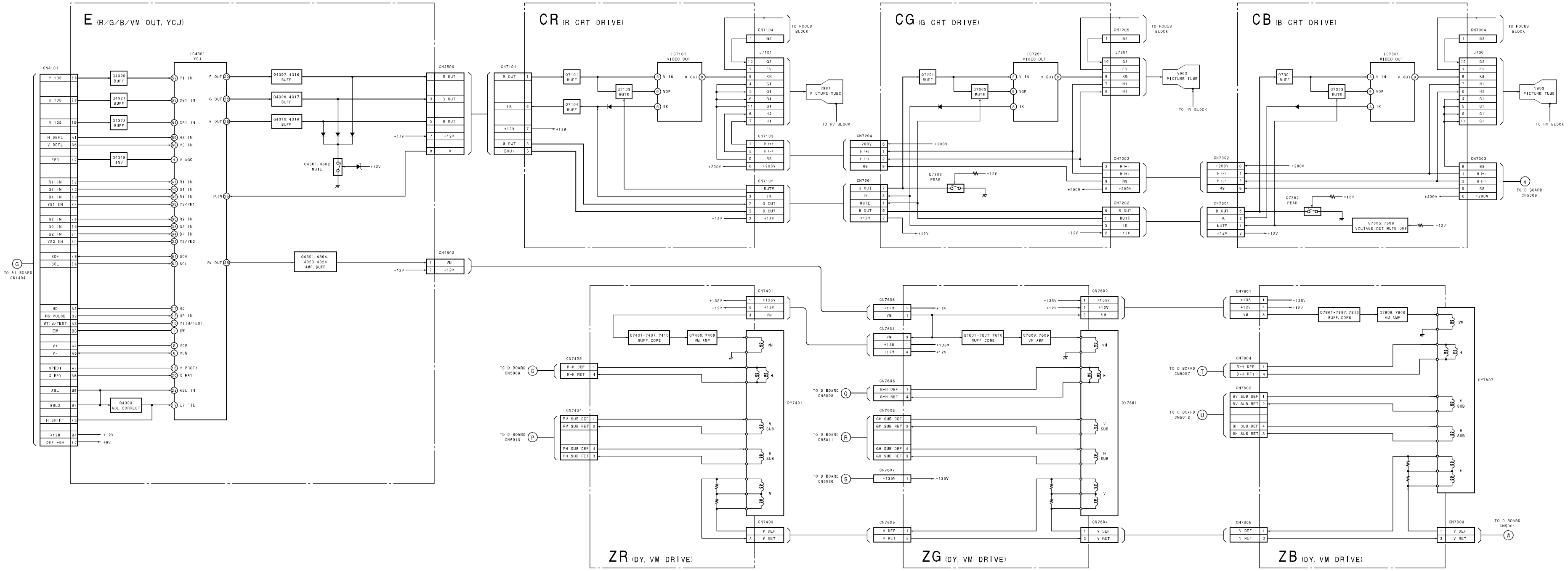
TO H1 BOARD CN3103
H2 BOARD CN3201
(43 inch model)
C1
C2
TO H1 BOARD CN3102
(48/53/61 inch model)
CN1302
D
TO M1 BOARD CN001
CN1001
FOR CHECK
CN1504
E
TO D BOARD CN5016
CN1502
F
TO B3 BOARD CN502
CN1201
CN1404
G
TO E BOARD CN4101
BC4 DIGITAL 3D COMFILTER MODULE
CN1801
B
TO J1 BOARD CN8101
IC1201 AUDIO CONTROL
IC1101 AUDIO AMP
IC1202 HP OUT
IC1301 MSP RESET
Q1101, 1102 PROT
Q1106 HP MUTE
Q1209 HP MUTE
Q1201 AUDIO MUTE
Q1206 AUDIO MUTE
Q1207 MUTE SW
Q1202-1204 AUDIO DET PROT
Q1103-1105 RELAY DRIVE
RY1101
RY1102
Q1309, 1310 BUFF
Q1311, 1312 BUFF
Q1205 MUTE
Q1208 MUTE
Q1308 SP MUTE
CN1102
NET WORK
CN6501
CN6503
CN6502
43 inch model
48/53/61 inch model
61 inch model
WH
WF
TW
CN1301
M1
TO H2 BOARD CN3202 (43 inch model)
M2
TO H2 BOARD CN3202 (48/53/61 inch model)
TU1304 MAIN TUNER
ATT SW
CP1302
(RF IN)
TU1303 SUB TUNER
Q1401, 1402 INV. SW
CN1501
H
TO D BOARD CN5017
CN1606
I1
TO G BOARD CN6300 (AUS/HK model)
I2
TO G1 BOARD CN6300 (GE/ME model)
Q1409 AC ON/OFF SW
IC1605 +5V REG
IC1601 +5V REG
IC1603 +3.3V REG
IC1604 +2.5V REG
IC1602 +9V REG
D1206
TO IC1201 IC1202 (+9V)
CN1503
J
TO D BOARD CN5018
CN1603
K1
TO G BOARD CN6303 (AUS/HK model)
K2
TO G1 BOARD CN6303 (GE/ME model)
CN1605
L1
TO G BOARD CN6301 (AUS/HK model)
L2
TO G1 BOARD CN6301 (GE/ME model)

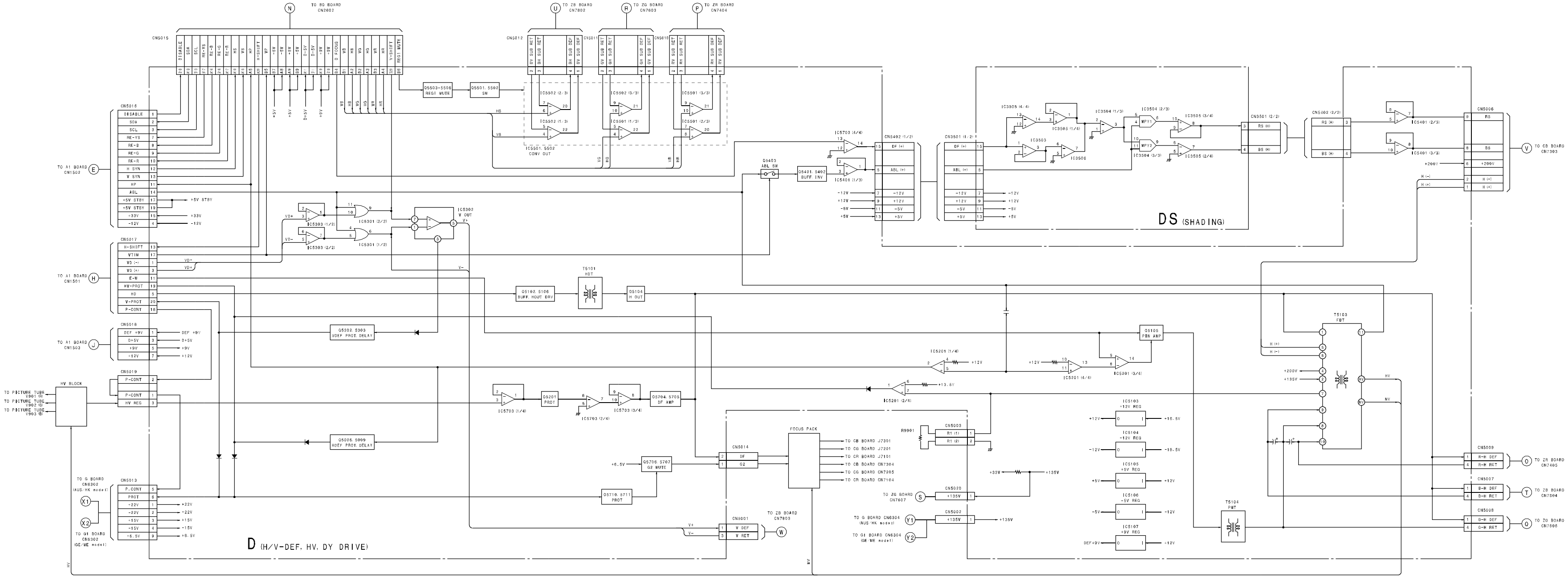

CN502 (1/2)
Y MAIN IN A21
U MAIN IN A22
V MAIN IN A23
VP M IN A24
HP M IN A25
SDA A12
SCL B12
FPD A5
HP SUB IN A15
Y SUB IN A19
U SUB IN A18
V SUB IN A17
VP SUB IN B16
F
TO A1 BOARD CN1201
Q501, 521 BUFF
Q503, 523 BUFF
Q502, 522 BUFF
Q601 BUFF
Q602 BUFF
IC501 MAIN A/D CONVERTER
VIN (A)
VIN (C)
VIN (B)
D (A) 1 – D (A) 8
D (B) 1 – D (B) 8
EXTCLP
XSYNC
CLK
Y0-7
C0-7
IC601 DRC
DIY0 – DIY7
DIC0 – DIC7
CLP
ADHD
W13I
IVD
WPLLHD
C54I
RPLLHD
HREF
GAME
S0
S1
INSEL
FFSW
PXI
FV
FH
FPD
DY02 – DY09
DB02 – DB09
DR02 – DR09
HD2
V90
C540
DQ0 – DQ15
DQ0-15
ADDR0 – ADDR11
A0-11
XCAS
XRAS
XWE
XCS
DOM
IC603 WRITE PLL
FINA
VCO OUT
FINB
IC504 READ PLL
VCO OUT
FINA
FINB
IC604 I/O EXPANDER
SDA
SCL
DAC3
DAC2
DAC1
DAC0
DAC4
SW0
SW3
SW2
SCL
SDA
IC602 16M DRAM
CLK
DQ0 – DQ15
ADDR0 – ADDR11
WE
CAS
RAS
CS
LDQM
UDQM
DY0-7
DB0-7
DR0-7
IC902 SUB UCOM
SDA
SCL
D1
D2
C1
C2
X1
X2
X901 20MHz
SO
SCK
PXI
SI
D0
C0
NVM-WP
NV-RST
VP-MAIN
RST
Q904 LEVEL SHIFT
Q905 LEVEL SHIFT
IC903 NVM
SDA
SCL
WC
VCC
Q906 NVM RST
D5V
IC303 PLL
SEROUT
SENABLE
SCLK
SDATA
SYNC
DSYNK
HOLD
CLK
IC302 SUB A/D CONVERTER
AIN
BIM
CIN
CLK
A0 – A7
B0 – B7
SY
CLP
Q302, 510 BUFF
Q303, 511 BUFF
Q301, 512 BUFF
Y0-7
C0-7
IC801 MID-X
CRCYIN0 – CRCYIN7
CRCCBIN0 – CRCCBIN7
DRCCRIN0 – DRCCRIN7
XDRCHS
XDRCVS
DRCDCLK
IICSDA
IICSCL
XVDOHS
VDOCLKOUT
VDOCLKIN
VDOYIN0 – VDOYIN7
VDOCIN0 – VDOCIN7
VDOCLAMP
XVDOVS
DSPY0 – DSPY7
DSPCB0 – DSPCB7
DSPCR0 – DSPCR7
DSPCLK
XDSPHS
XDSPVS
XRESET
SDDAT0 – SDDAT31
D0-31
SDADR0 – SDADR12
A0-12
SDDQM0
SDDQM1
SDCKE
SDCLKIN
SDCLK
DXT1OUT
DXT1IN
DXT2IN
X802 17.28MHz
X801 54MHz
IC802 64M DRAM
DQ0 – DQ31
A0 – A12
DQM0
DQM1
DQM2
DQM3
CKE
CLK
G0-7
B0-7
R0-7
IC506
IC505
IC901 D/A CONVERTER
G2 – G9
B2 – B9
R2 – R9
RCK
GCK
BCK
G0
B0
R0
Q901, 908 BUFF
Q902, 907 BUFF
Q903, 909 BUFF
Q519 INV
IC803 RESET
RST
VCC
+2.5V
Q520 INV
IC904 RESET
RST
VCC
D5V
+4.2V
Q517 +4.2V REG
+5V
3.3VGR
Q516 +3.3V REG
A3.3V
Q524 +3.3V REG
D5V
TO IC303 (+5V)
IC311 +5V REG
O
I
+9V
CN502 (2/2)
A7 Y 100 OUT
A8 U 100 OUT
A9 V 100 OUT
A6 HP 100 OUT
B6 VP 100 OUT
A11 RESET 100
A13 +5V
B13 +2.5V
A14 +3.3V
B14 A5V
A16 +9V
+5V
+2.5V
+3.3V
A5V
+9V
H
TO A1 BOARD CN1201

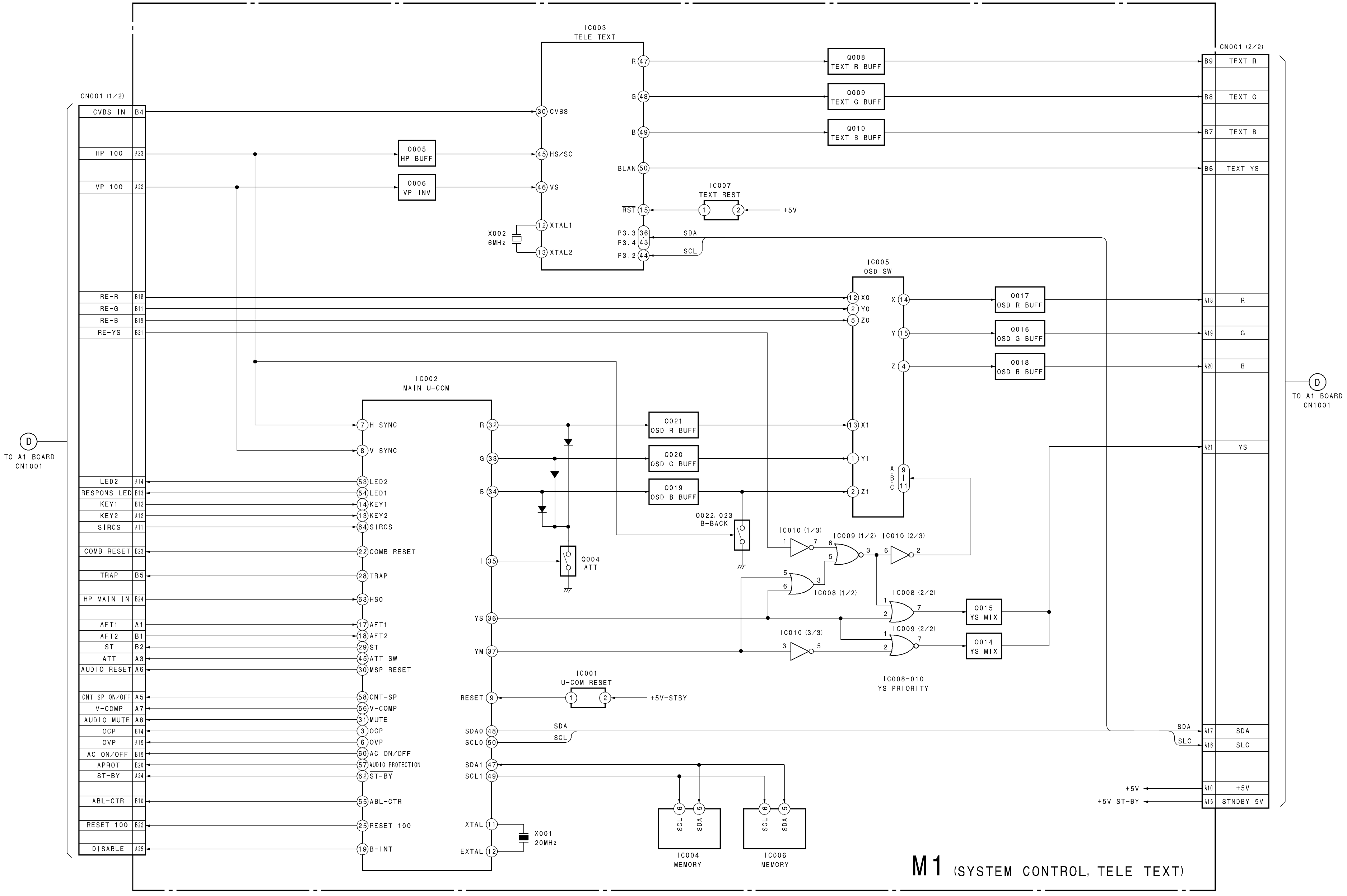
B3 (DRC, MID-X, VIDEO PROCESS)

BD (PJED, REGI CORRECTION)

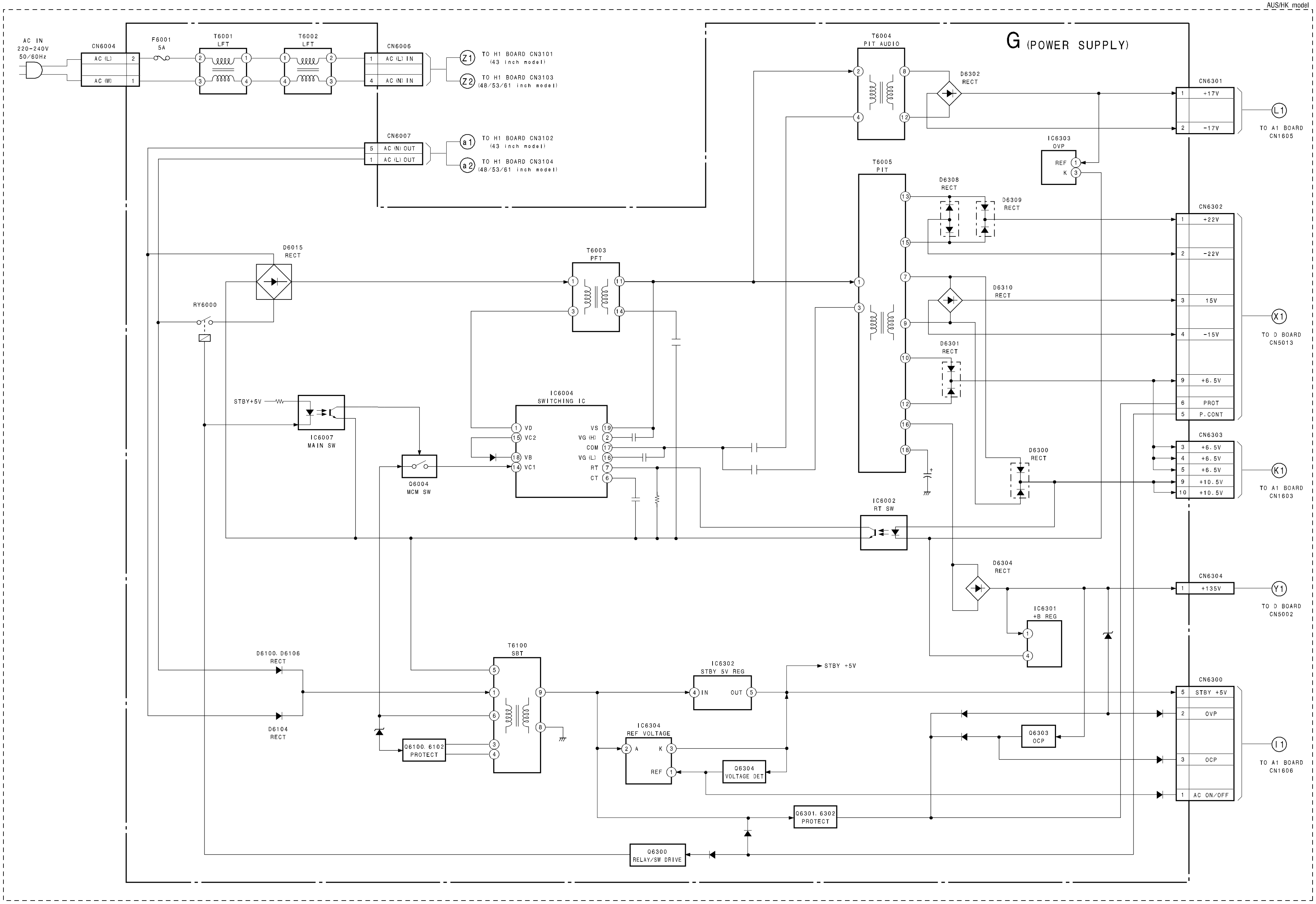

UPPER SENSOR
LOWER SENSOR
RIGHT SENSOR
LEFT SENSOR
CN2603
UPPER 1
LOWER 3
RIGHT 5
LEFT 7
IC2626 (1/4) 1V CONV. PEAK HOLD
IC2626 (2/4) 1V CONV. PEAK HOLD
IC2626 (3/4) 1V CONV. PEAK HOLD
IC2626 (4/4) 1V CONV. PEAK HOLD
Q2611
Q2610
Q2613
Q2612
IC2627 (1/4)
IC2627 (2/4)
IC2627 (3/4)
IC2627 (4/4)
Q2614 SW
IC2619 PJED-CPU
I AREGI D0
I AREGI D3
I AREGI D1
I AREGI D2
O AREG RST
O OSC
I OSC
X2701 12MHz
O VSHIFT
O HSHIFT
I BINT
MAIN SDA
MAIN SCL
O DREGI MUTE
I VPULSE
I VP
O IIC SW
I DREG SDA
O DREG SDA
DREG SCL
O R
O G
O B
O I
O YS
O YM
I DREG OVF
I DREG BSY
I DREG ACK
O NVM STOP
O DREGI RST
O KUMUPRT
I HP
I EXLC
Q2608 INV
IC2611 I2C BUS SW
CN2602 (1/2)
V SHIFT B20
H SHIFT A20
DISABLE B10
SDA A13
SCL B13
REGI MUTE B6
VP B5
-5V B7
-5V A8
+5V A9
+5V B9
D+5V A11
D+5V B11
+9V A19
+9V B19
VS A15
HP A5
HS A10
-5V
+5V
D+5V
+9V
TO D BOARD CN5015
N
CN2601
SCL 2
SDA 3
/BINT 4
PSCL 6
PSDA 7
D+5V 5
TO JIG
D+5V
IC2617 RESET
RST VCC
TO IC2621, IC2619
+5V
D+5V
IC2607 (1/3) OSD MIX
IC2607 (2/3) OSD MIX
IC2607 (3/3) OSD MIX
Q2606 ATT
Q2605 ATT
Q2602 BUFF
Q2607 BUFF
Q2604 BUFF
Q2601 BUFF
IC2605 DIGITAL-REGI
XOFDEF
XBUSY
XACKM
XSTOP
XRESET
XWC
ODDEVEN
HBLKIN
PWM2
SDAS
SCLS
VBLKIN
XMUTE
SCLM
SDAM
TEST4
TEST5
ROUT
GOUT
BOUT
YMOUT
YSOUT
DA OUT
RHOUT
WCLK
BCLK
RVOUT
GHOUT
GVOUT
BHOUT
BVOUT
IC2621 EEPROM
WP
PSDA
PSCL
IC2618 V/H.DELAY
2A
1A
2Q
1Q
IC2620 EVEN/ODD
1CK
1D
1Q
IC2613 16MHz PLL
2Q
/1Q
1D
2D
1CLK
2CLK
IC2615
IC2612 PLL
VCO OUT
FINA
FINB
IC2609 RH DAC
IC2625 RV DAC
IC2604 GH DAC
IC2623 GV DAC
IC2602 BH DAC
IC2614 BV DAC
DATA
WCLK
BCLK
VOUT
RF
IC2608 (1/2) AMP
IC2622 (1/2) AMP
IC2603 (1/2) AMP
IC2616 (1/2) AMP
IC2601 (1/2) AMP
IC2610 (1/2) AMP
IC2608 (2/2) FILTER, AMP
IC2622 (2/2) FILTER, AMP
IC2603 (2/2) FILTER, AMP
IC2616 (2/2) FILTER, AMP
IC2601 (2/2) FILTER, AMP
IC2610 (2/2) FILTER, AMP
CN2602 (2/2)
A17 RE-R
B16 RE-G
A16 RE-B
B17 RE-YS
B4 D FOCUS
A4 HR
B3 VR
A3 HG
B2 VG
A2 HB
B1 VB
TO D BOARD CN5015
N


E (R/G/B/VM OUT, YCJ)
CR (R CRT DRIVE)
CG (G CRT DRIVE)
CB (B CRT DRIVE)
ZR (DY, VM DRIVE)
ZG (DY, VM DRIVE)
ZB (DY, VM DRIVE)
IC4301 YCJ
CN4101
CN4500
CN4502
IC7101 VIDEO OUT
IC7201 VIDEO OUT
IC7301 VIDEO OUT
PICTURE TUBE
TO FOCUS BLOCK
TO HV BLOCK
TO A1 BOARD CN1456
TO D BOARD
DY7401
DY7601
DY7607

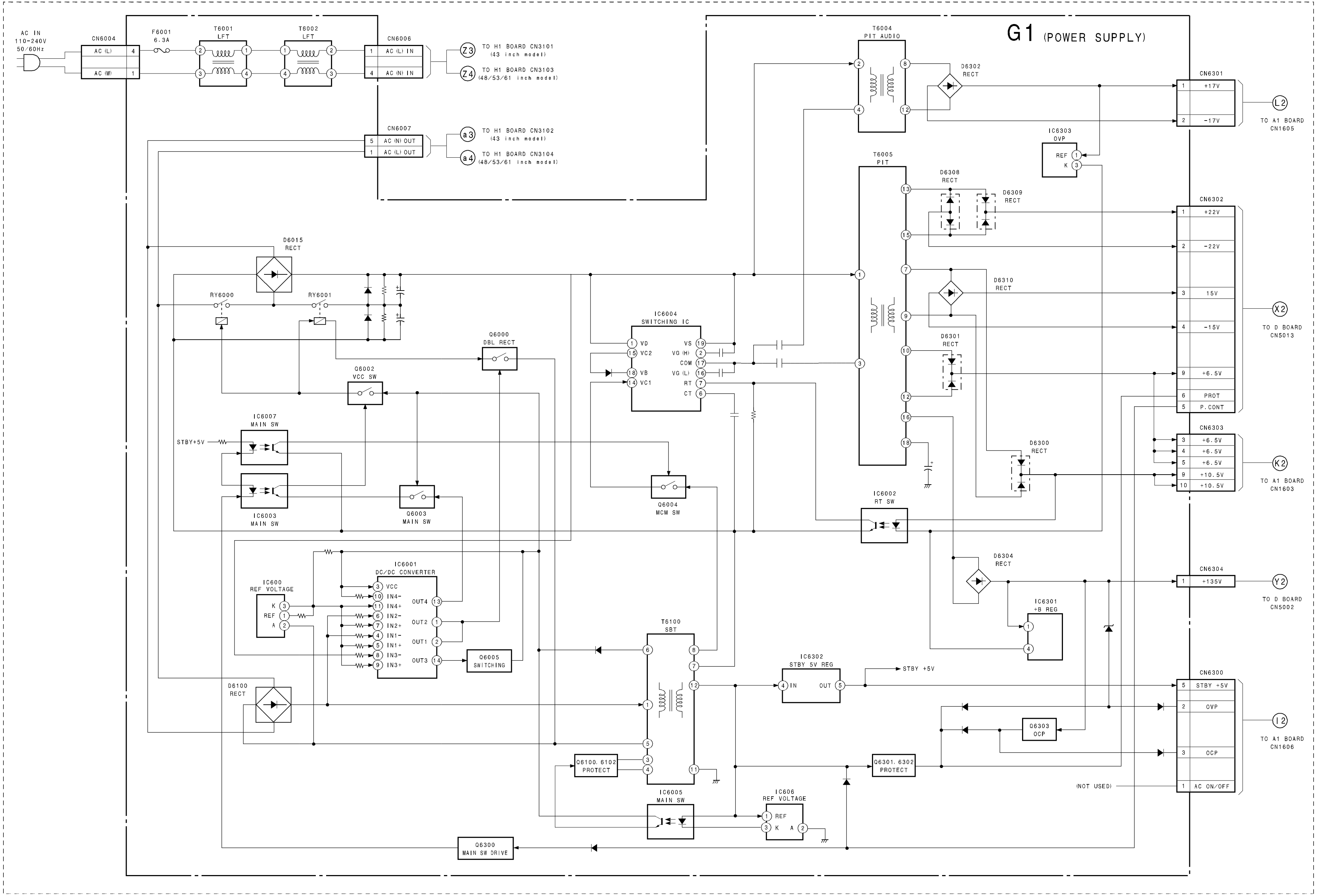

D (H/V-DEF. HV. DY DRIVE)
DS (SHADING)
TO RQ BOARD CN2602
TO ZB BOARD CN7603
TO ZG BOARD CN7603
TO ZR BOARD CN7604
CN5015
CN5016
CN5017
CN5018
CN5019
CN5013
TO A1 BOARD CN1502
TO A1 BOARD CN1501
TO A1 BOARD CN1503
TO PICTURE TUBE V901 (R)
TO PICTURE TUBE V902 (G)
TO PICTURE TUBE V903 (B)
HV BLOCK
TO G BOARD CN6302 (AUS·HK model)
TO G1 BOARD CN6302 (GE/WE model)
Q5503–5506 REG1 MUTE
Q5501, 5502 SW
IC5501, 5502 CONV OUT
IC5303 V OUT
IC5303 (1/2)
IC5303 (2/2)
IC5301 (1/2)
IC5301 (2/2)
T5101 HDT
Q5102, 5103 BUFF. HOUT DRV
Q5104 H OUT
Q5302, 5303 VDEF PROT. DELAY
Q5208, 5209 HDEF PROT. DELAY
Q5201 PROT
IC5703 (1/4)
IC5703 (2/4)
IC5703 (3/4)
IC5703 (4/4)
Q5704, 5705 DF AMP
Q5706, 5707 G2 MUTE
Q5710, 5711 PROT
CN5014
FOCUS PACK
TO CB BOARD J7301
TO CG BOARD J7201
TO CR BOARD J7101
TO CB BOARD CN7304
TO CG BOARD CN7203
TO CR BOARD CN7104
CN5001
V DEF
V RET
TO ZB BOARD CN7603
Q5403 ABL SW
Q5401, 5402 BUFF. INV
IC5401 (1/2)
CN5402 (1/2)
CN3501 (1/2)
CN3501 (2/2)
CN5402 (2/2)
IC3505 (4/4)
IC3502 (1/4)
IC3503
IC3506
IC3504 (1/3)
IC3504 (2/3)
IC3504 (3/3)
IC3505 (3/4)
IC3505 (2/4)
MPY1
MPY2
IC5401 (2/3)
IC5401 (3/3)
CN5006
TO CS BOARD CN7303
IC5201 (1/4)
IC5201 (2/4)
IC5201 (3/4)
IC5201 (4/4)
Q5105 PIN AMP
T5103 FBT
T5104 PMT
R9901
CN5003
CN5020
CN5002
TO ZG BOARD CN7607
TO G BOARD CN6304 (AUS·HK model)
TO G1 BOARD CN6304 (GE/WE model)
IC5103 +12V REG
IC5104 −12V REG
IC5105 +5V REG
IC5106 −5V REG
IC5107 +9V REG
CN5009
CN5007
CN5008
TO ZR BOARD CN7405
TO ZB BOARD CN7504
TO ZG BOARD CN7505
+135V
+200V
HV


CN001 (1/2)
CVBS IN B4
HP 100 A23
VP 100 A22
RE-R B18
RE-G B11
RE-B B19
RE-YS B21
TO A1 BOARD CN1001
LED2 A14
RESPONS LED B13
KEY1 B12
KEY2 A12
SIRCS A11
COMB RESET B23
TRAP B5
HP MAIN IN B24
AFT1 A1
AFT2 B1
ST B2
ATT A3
AUDIO RESET A6
CNT SP ON/OFF A5
V-COMP A7
AUDIO MUTE A8
OCP B14
OVP A15
AC ON/OFF B15
APROT B20
ST-BY A24
ABL-CTR B10
RESET 100 B22
DISABLE A25
Q005 HP BUFF
Q006 VP INV
IC003 TELE TEXT
30 CVBS
45 HS/SC
46 VS
12 XTAL1
13 XTAL2
X002 6MHz
R 47
G 48
B 49
BLAN 50
RST 15
P3.3 36
P3.4 43
P3.2 44
SDA
SCL
IC007 TEXT REST
+5V
Q008 TEXT R BUFF
Q009 TEXT G BUFF
Q010 TEXT B BUFF
IC005 OSD SW
12 X0
2 Y0
5 Z0
13 X1
1 Y1
2 Z1
X 14
Y 15
Z 4
A B C 9 10 11
Q017 OSD R BUFF
Q016 OSD G BUFF
Q018 OSD B BUFF
IC002 MAIN U-COM
7 H SYNC
8 V SYNC
53 LED2
54 LED1
14 KEY1
13 KEY2
64 SIRCS
22 COMB RESET
28 TRAP
63 HS0
17 AFT1
18 AFT2
29 ST
45 ATT SW
30 MSP RESET
58 CNT-SP
56 V-COMP
31 MUTE
3 OCP
6 OVP
60 AC ON/OFF
57 AUDIO PROTECTION
62 ST-BY
55 ABL-CTR
25 RESET 100
19 B-INT
R 32
G 33
B 34
I 35
YS 36
YM 37
RESET 9
SDA0 48
SCL0 50
SDA1 47
SCL1 49
XTAL 11
EXTAL 12
X001 20MHz
Q021 OSD R BUFF
Q020 OSD G BUFF
Q019 OSD B BUFF
Q004 ATT
Q022, 023 B-BACK
IC010 (1/3)
IC009 (1/2)
IC010 (2/3)
IC008 (1/2)
IC008 (2/2)
IC009 (2/2)
IC010 (3/3)
Q015 YS MIX
Q014 YS MIX
IC008-010 YS PRIORITY
IC001 U-COM RESET
+5V-STBY
IC004 MEMORY
IC006 MEMORY
SCL 6
SDA 5
CN001 (2/2)
B9 TEXT R
B8 TEXT G
B7 TEXT B
B6 TEXT YS
A18 R
A19 G
A20 B
A21 YS
A17 SDA
A16 SLC
A10 +5V
A15 STNDBY 5V
+5V
+5V ST-BY
TO A1 BOARD CN1001

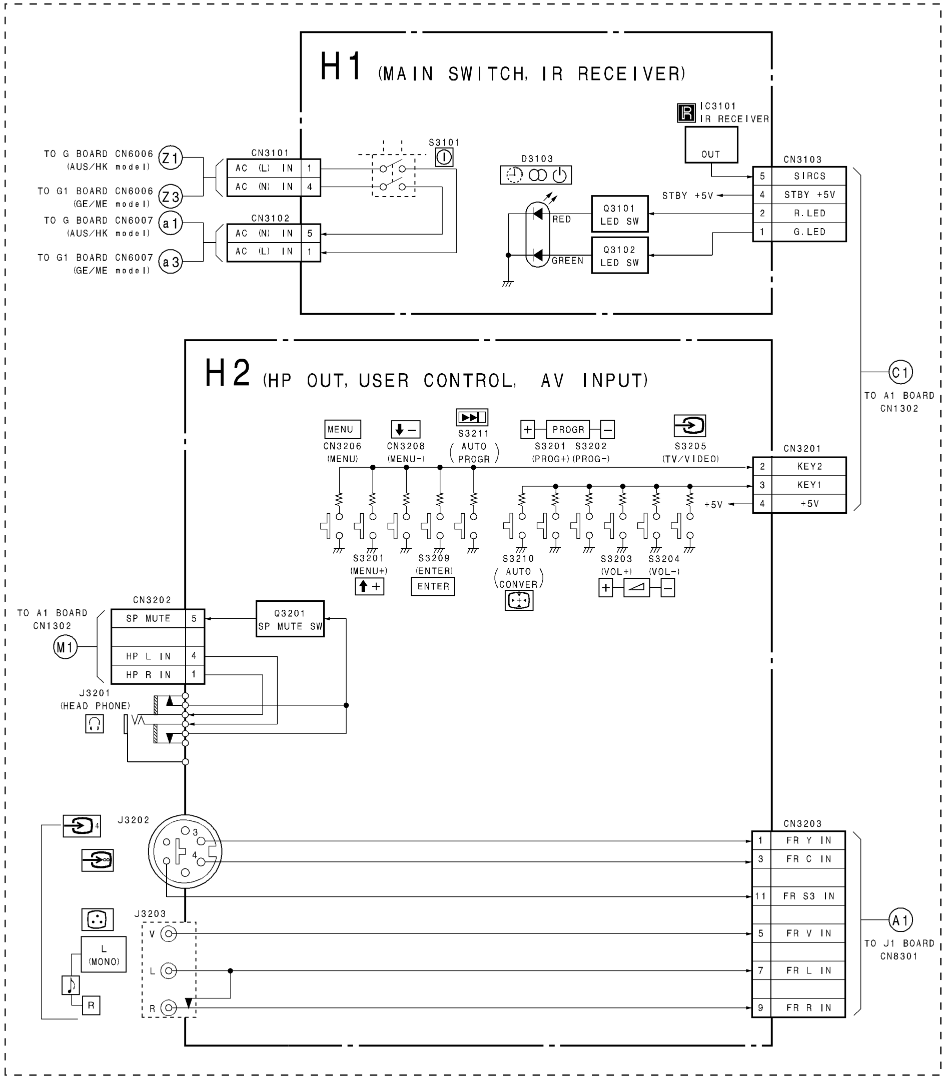
M1 (SYSTEM CONTROL, TELE TEXT)


AUS/HK model
G (POWER SUPPLY)
AC IN
220–240V
50/60Hz
CN6004
AC (L)
AC (W)
F6001
5A
T6001
LFT
T6002
LFT
CN6006
AC (L) IN
AC (N) IN
TO H1 BOARD CN3101
(43 inch model)
TO H1 BOARD CN3103
(48/53/61 inch model)
CN6007
AC (N) OUT
AC (L) OUT
TO H1 BOARD CN3102
(43 inch model)
TO H1 BOARD CN3104
(48/53/61 inch model)
Z1
Z2
a1
a2
D6015
RECT
RY6000
T6003
PFT
STBY+5V
IC6007
MAIN SW
IC6004
SWITCHING IC
VD
VC2
VB
VC1
VS
VG (H)
COM
VG (L)
RT
CT
Q6004
MCM SW
T6004
PIT AUDIO
D6302
RECT
T6005
PIT
D6308
RECT
D6309
RECT
D6310
RECT
D6301
RECT
D6300
RECT
IC6303
OVP
REF
K
IC6002
RT SW
D6304
RECT
IC6301
+B REG
CN6301
+17V
−17V
TO A1 BOARD
CN1605
L1
CN6302
+22V
−22V
15V
−15V
+6.5V
PROT
P.CONT
TO D BOARD
CN5013
X1
CN6303
+6.5V
+6.5V
+6.5V
+10.5V
+10.5V
TO A1 BOARD
CN1603
K1
CN6304
+135V
TO D BOARD
CN5002
Y1
D6100, D6106
RECT
D6104
RECT
T6100
SBT
Q6100, 6102
PROTECT
IC6302
STBY 5V REG
IN
OUT
STBY +5V
IC6304
REF VOLTAGE
A
K
REF
Q6304
VOLTAGE DET
Q6303
OCP
Q6301, 6302
PROTECT
Q6300
RELAY/SW DRIVE
CN6300
STBY +5V
OVP
OCP
AC ON/OFF
TO A1 BOARD
CN1606
I1

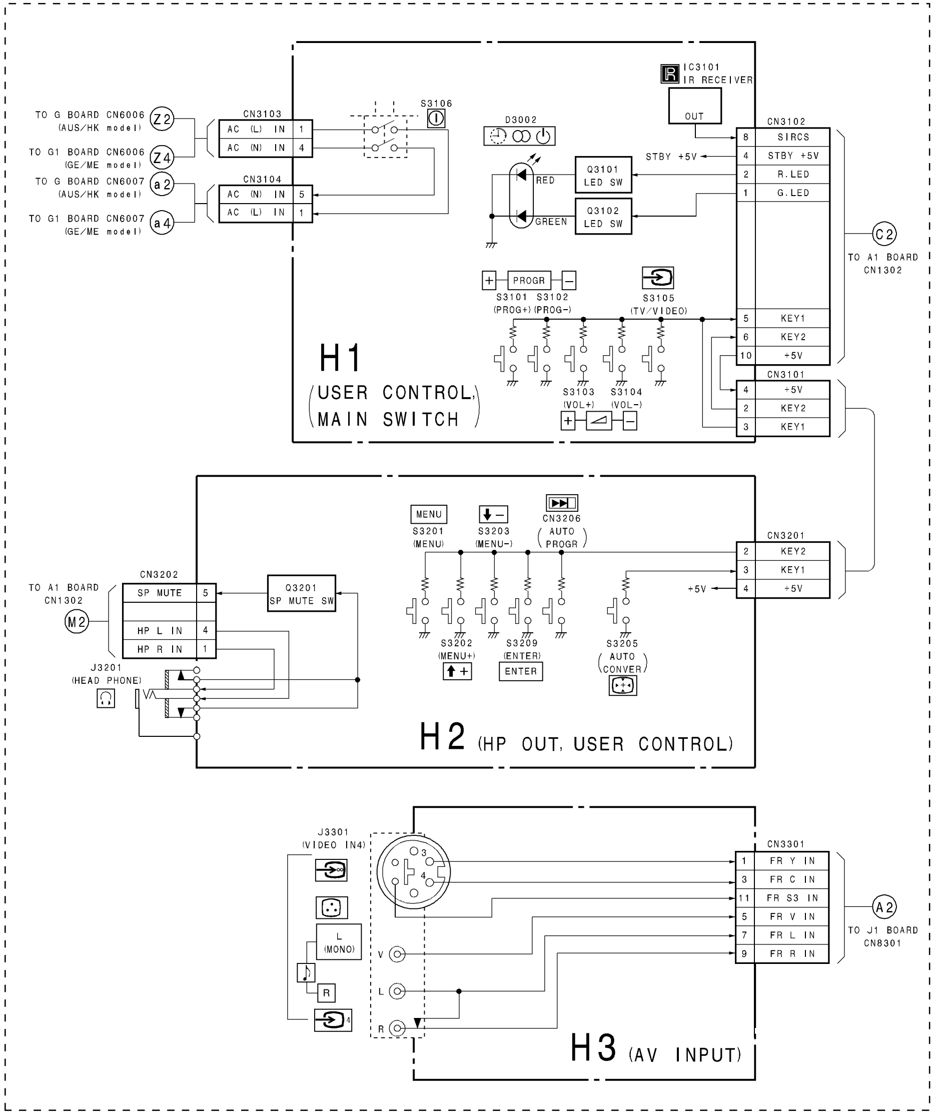
G1 (POWER SUPPLY)


AC IN
110-240V
50/60Hz
CN6004
AC (L)
AC (N)
F6001
6.3A
T6001
LFT
T6002
LFT
CN6006
AC (L) IN
AC (N) IN
Z3
TO H1 BOARD CN3101
(43 inch model)
Z4
TO H1 BOARD CN3103
(48/53/61 inch model)
CN6007
AC (N) OUT
AC (L) OUT
a3
TO H1 BOARD CN3102
(43 inch model)
a4
TO H1 BOARD CN3104
(48/53/61 inch model)
D6015
RECT
RY6000
RY6001
Q6000
DBL RECT
Q6002
VCC SW
IC6007
MAIN SW
STBY+5V
IC6003
MAIN SW
Q6003
MAIN SW
IC6004
SWITCHING IC
VD
VC2
VB
VC1
VS
VG (H)
COM
VG (L)
RT
CT
Q6004
MCM SW
IC600
REF VOLTAGE
K
REF
A
IC6001
DC/DC CONVERTER
VCC
IN4-
IN4+
IN2-
IN2+
IN1-
IN1+
IN3-
IN3+
OUT4
OUT2
OUT1
OUT3
Q6005
SWITCHING
D6100
RECT
T6100
SBT
Q6100, 6102
PROTECT
IC6005
MAIN SW
Q6300
MAIN SW DRIVE
T6004
PIT AUDIO
D6302
RECT
IC6303
OVP
REF
K
T6005
PIT
D6308
RECT
D6309
RECT
D6310
RECT
D6301
RECT
D6300
RECT
IC6002
RT SW
D6304
RECT
IC6301
+B REG
IC6302
STBY 5V REG
IN
OUT
STBY +5V
IC606
REF VOLTAGE
REF
K
A
Q6303
OCP
Q6301, 6302
PROTECT
(NOT USED)
CN6301
+17V
-17V
L2
TO A1 BOARD
CN1605
CN6302
+22V
-22V
15V
-15V
+6.5V
PROT
P.CONT
X2
TO D BOARD
CN5013
CN6303
+6.5V
+6.5V
+6.5V
+10.5V
+10.5V
K2
TO A1 BOARD
CN1603
CN6304
+135V
Y2
TO D BOARD
CN5002
CN6300
STBY +5V
OVP
OCP
AC ON/OFF
I2
TO A1 BOARD
CN1606

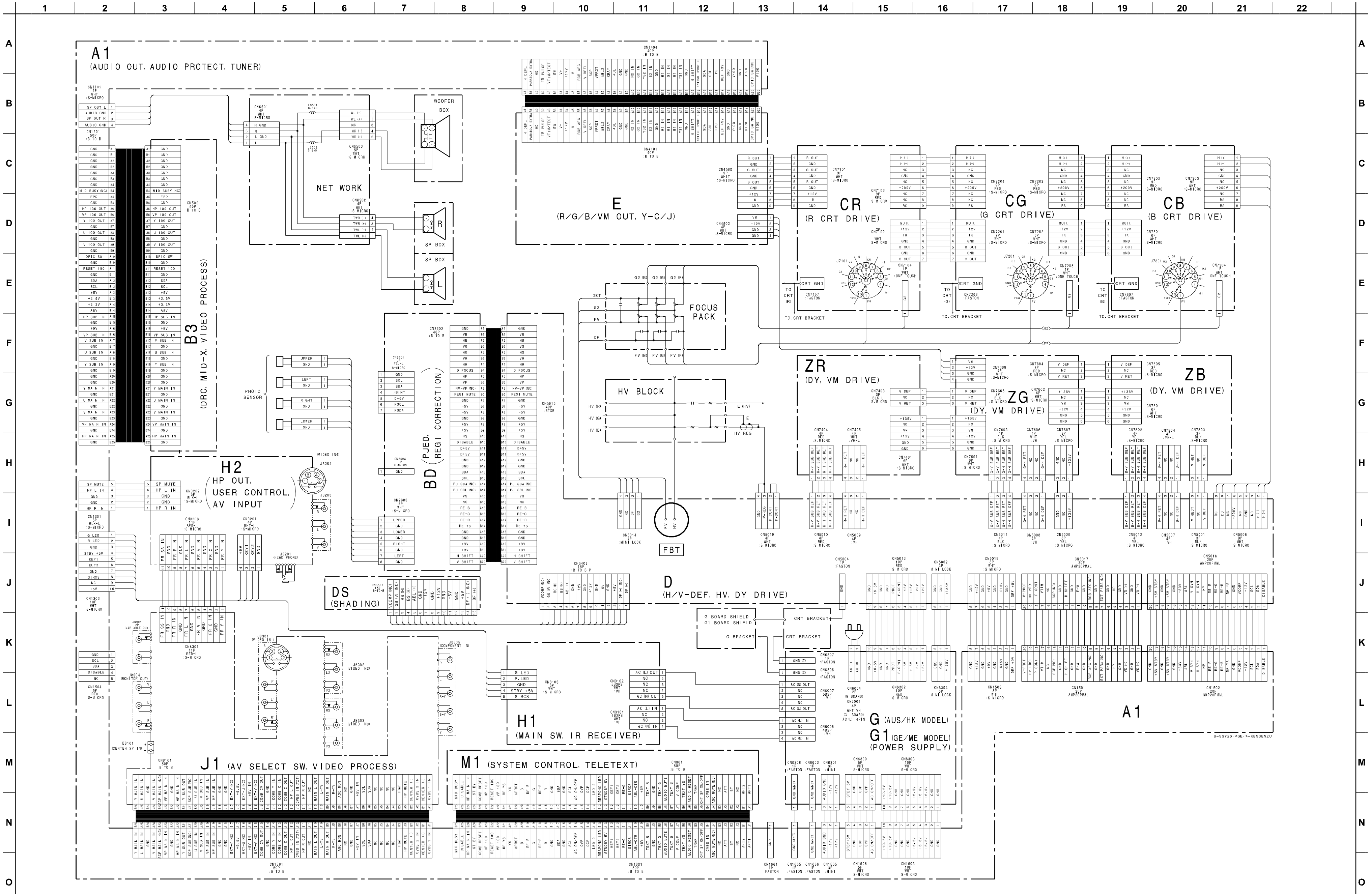
43inch model


H1 (MAIN SWITCH, IR RECEIVER)
TO G BOARD CN6006 (AUS/HK model)
TO G1 BOARD CN6006 (GE/ME model)
TO G BOARD CN6007 (AUS/HK model)
TO G1 BOARD CN6007 (GE/ME model)
Z1
Z3
a1
a3
CN3101
AC (L) IN 1
AC (N) IN 4
CN3102
AC (N) IN 5
AC (L) IN 1
S3101
D3103
RED
GREEN
Q3101 LED SW
Q3102 LED SW
IC3101 IR RECEIVER
OUT
STBY +5V
CN3103
5 SIRCS
4 STBY +5V
2 R.LED
1 G.LED
C1
TO A1 BOARD CN1302
H2 (HP OUT, USER CONTROL, AV INPUT)
MENU
CN3206 (MENU)
CN3208 (MENU–)
S3211 (AUTO PROGR)
PROGR
S3201 S3202 (PROG+) (PROG–)
S3205 (TV/VIDEO)
CN3201
2 KEY2
3 KEY1
4 +5V
+5V
S3201 (MENU+)
S3209 (ENTER)
ENTER
S3210 (AUTO CONVER)
S3203 (VOL+)
S3204 (VOL–)
TO A1 BOARD CN1302
M1
CN3202
SP MUTE 5
HP L IN 4
HP R IN 1
Q3201 SP MUTE SW
J3201 (HEAD PHONE)
J3202
J3203
V
L
R
L (MONO)
R
CN3203
1 FR Y IN
3 FR C IN
11 FR S3 IN
5 FR V IN
7 FR L IN
9 FR R IN
A1
TO J1 BOARD CN8301

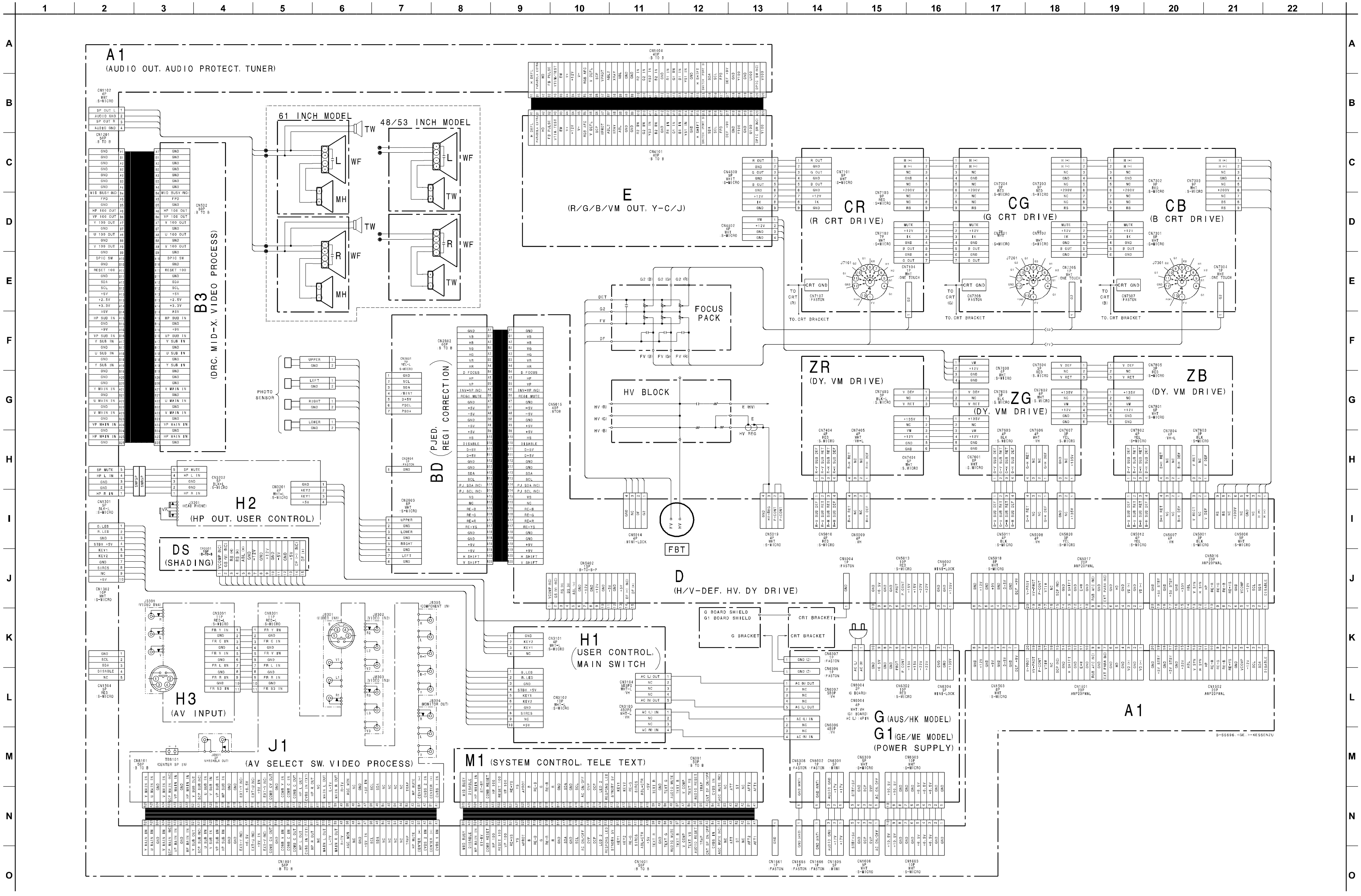
48/53/61inch model


TO G BOARD CN6006 (AUS/HK model)
TO G1 BOARD CN6006 (GE/ME model)
TO G BOARD CN6007 (AUS/HK model)
TO G1 BOARD CN6007 (GE/ME model)
Z2
Z4
a2
a4
CN3103
AC (L) IN 1
AC (N) IN 4
CN3104
AC (N) IN 5
AC (L) IN 1
S3106
D3002
RED
GREEN
Q3101 LED SW
Q3102 LED SW
IC3101 IR RECEIVER
OUT
STBY +5V
CN3102
8 SIRCS
4 STBY +5V
2 R.LED
1 G.LED
5 KEY1
6 KEY2
10 +5V
C2
TO A1 BOARD CN1302
PROGR
S3101 S3102 (PROG+) (PROG–)
S3105 (TV/VIDEO)
H1 (USER CONTROL, MAIN SWITCH)
S3103 (VOL+)
S3104 (VOL–)
CN3101
4 +5V
2 KEY2
3 KEY1
MENU
S3201 (MENU)
S3203 (MENU–)
CN3206 (AUTO PROGR)
CN3201
2 KEY2
3 KEY1
4 +5V
+5V
TO A1 BOARD CN1302
M2
CN3202
SP MUTE 5
HP L IN 4
HP R IN 1
Q3201 SP MUTE SW
J3201 (HEAD PHONE)
S3202 (MENU+)
S3209 (ENTER)
ENTER
S3205 (AUTO CONVER)
H2 (HP OUT, USER CONTROL)
J3301 (VIDEO IN4)
L (MONO)
R
V
L
R
CN3301
1 FR Y IN
3 FR C IN
11 FR S3 IN
5 FR V IN
7 FR L IN
9 FR R IN
A2
TO J1 BOARD CN8301
H3 (AV INPUT)

7-2. FRAME SCHEMATIC DIAGRAM (1) (KP-ES43)

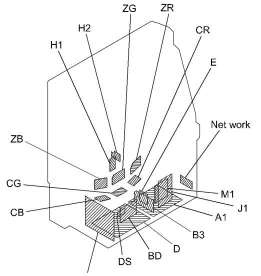

A1
(AUDIO OUT, AUDIO PROTECT, TUNER)
B3
(DRC, MID-X, VIDEO PROCESS)
NET WORK
WOOFER BOX
SP BOX
E
(R/G/B/VM OUT, Y-C/J)
CR
(R CRT DRIVE)
CG
(G CRT DRIVE)
CB
(B CRT DRIVE)
FOCUS PACK
HV BLOCK
FBT
ZR
(DY, VM DRIVE)
ZG
(DY, VM DRIVE)
ZB
(DY, VM DRIVE)
BD
(PJED, REGI CORRECTION)
PHOTO SENSOR
H2
(HP OUT, USER CONTROL, AV INPUT)
DS
(SHADING)
D
(H/V-DEF, HV, DY DRIVE)
H1
(MAIN SW, IR RECEIVER)
G (AUS/HK MODEL)
G1 (GE/ME MODEL)
(POWER SUPPLY)
J1 (AV SELECT SW, VIDEO PROCESS)
M1 (SYSTEM CONTROL, TELETEXT)
TO CRT (R)
TO CRT (G)
TO CRT (B)
TO.CRT BRACKET
G BOARD SHIELD
G1 BOARD SHIELD
G BRACKET
CRT BRACKET
A1
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O

FRAME SCHEMATIC DIAGRAM (2) (KP-ES48/53/61)


A1
(AUDIO OUT, AUDIO PROTECT, TUNER)
61 INCH MODEL
48/53 INCH MODEL
TW
WF
MH
L
R
B3
(DRC, MID-X, VIDEO PROCESS)
E
(R/G/B/VM OUT, Y-C/J)
CR
(R CRT DRIVE)
CG
(G CRT DRIVE)
CB
(B CRT DRIVE)
FOCUS PACK
HV BLOCK
FBT
ZR
(DY, VM DRIVE)
ZG
(DY, VM DRIVE)
ZB
(DY, VM DRIVE)
PHOTO SENSOR
UPPER
LEFT
RIGHT
LOWER
BD
(PJED, REGI CORRECTION)
H2
(HP OUT, USER CONTROL)
DS
(SHADING)
D
(H/V-DEF, HV, DY DRIVE)
H1
(USER CONTROL, MAIN SWITCH)
H3
(AV INPUT)
J1
(AV SELECT SW, VIDEO PROCESS)
M1 (SYSTEM CONTROL, TELE TEXT)
G (AUS/HK MODEL)
G1 (GE/ME MODEL)
(POWER SUPPLY)
A1
G BOARD SHIELD
G1 BOARD SHIELD
G BRACKET
CRT BRACKET
TO CRT BRACKET

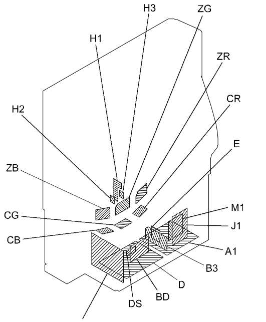
7-3. CIRCUIT BOARDS LOCATION

- **KP-ES43**



G (KP-ES43HK1/SN1)
G1 (KP-ES43ME1/MN1)

- **KP-ES48/ES53/ES61**



G (KP-ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
G1 (KP-ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)

7-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- The parts marked "#" on schematic diagrams are not mounted.
- All capacitors are in μF unless otherwise noted. (pF: μμF) Capacitors without voltage indication are all 50 V.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm
Rating electrical power 1/4 W (CHIP : 1/10 W)

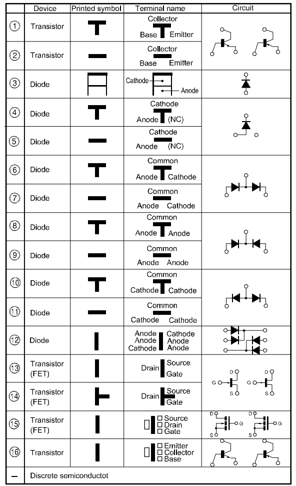
- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- △ : internal component.
- ☐ : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth-ground.
- : earth-chassis.
- All voltages are in V.
- Readings are taken with a 10 M digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- ✱ : Can not be measured.
- NO MARK: Common
- < > : SECAM
- ( ) : NTSC 3.58 MHz
- Circled numbers are waveform references.
- : B + bus.
- : B – bus.
- ⇨ : Signal path.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Terminal name of semiconductors in silk screen printed circuit (✱)



	Device	Printed symbol	Terminal name	Circuit
①	Transistor		Collector Base Emitter	
②	Transistor		Collector Base Emitter	
③	Diode		Cathode Anode	
④	Diode		Cathode Anode (NC)	
⑤	Diode		Cathode Anode (NC)	
⑥	Diode		Common Anode Cathode	
⑦	Diode		Common Anode Cathode	
⑧	Diode		Common Anode Anode	
⑨	Diode		Common Anode Anode	
⑩	Diode		Common Cathode Cathode	
⑪	Diode		Common Cathode Cathode	
⑫	Diode		Anode Cathode Anode Anode Cathode Anode	
⑬	Transistor (FET)		Drain Source Gate	
⑭	Transistor (FET)		Drain Source Gate	
⑮	Transistor (FET)		Source Drain Gate	
⑯	Transistor		Emitter Collector Base	
–	Discrete semiconductot			

(Chip semiconductors that are not actually used are included.) Ver.1.5

- **J1 BOARD SEMICONDUCTOR LOCATION**

IC

	(Component Side)	(Conductor Side)
IC8302	A-1	
IC8304		C-2
IC8305		C-1
IC8306	C-1	
IC8308	C-2	
IC8309	D-1	
IC8310	D-1	
IC8311	D-1	
IC8312	E-2	
IC8801	C-2	

TRANSISTOR

	(Component Side)	(Conductor Side)	✱
Q8301		A-2	①
Q8302		A-2	①
Q8303		A-2	①
Q8304		A-2	①
Q8306		A-2	①
Q8307	E-2		②
Q8308		A-2	①
Q8309		A-2	①
Q8316	D-2		②
Q8317	D-2		②
Q8318	D-2		②
Q8319	D-2		②
Q8321		B-1	①
Q8322		B-1	①
Q8323	D-2		②
Q8324	D-2		②
Q8326		D-2	①
Q8327		D-2	①
Q8328		D-2	①
Q8332	D-2		②
Q8338		D-2	①
Q8340	D-1		②
Q8401		C-1	①
Q8402		C-2	①
Q8405		D-2	①
Q8406		D-2	①
Q8407		D-2	①
Q8408		D-2	①
Q8409	E-1		②
Q8410	E-1		②
Q8411	E-1		②
Q8412	E-1		②
Q8413	E-1		②
Q8414	E-1		②
Q8415	E-1		②
Q8416	E-1		–
Q8417	E-1		–
Q8418	E-1		–
Q8419	D-2		–
Q8420	E-2		②
Q8421		D-1	①
Q8422	E-2		②
Q8423		D-1	①
Q8424	E-2		②
Q8425		D-2	①
Q8426		D-2	①
Q8601	C-1		②
Q8602	C-1		②
Q8603	C-1		②
Q8604	C-1		②
Q8605	C-2		②
Q8606	C-2		②
Q8607	C-2		②
Q8801	C-2		②
Q8802	C-2		②
Q8803		D-2	①
Q8804		D-1	①
Q8805	D-2		②
Q8807	D-2		②
Q8808	D-2		②
Q8809	D-2		②
Q8810	C-2		②
Q8811	C-2		②

DIODE

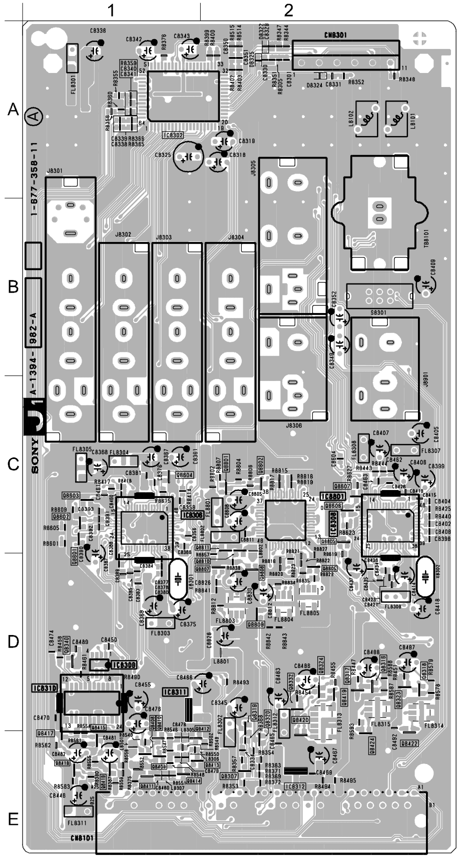
	(Component Side)	(Conductor Side)	✱
D8101		A-1	③
D8102		A-1	③
D8103		A-1	③
D8104		A-1	③
D8301		A-2	③
D8302		B-2	③
D8303		B-2	③
D8304		B-2	③
D8305		C-2	③
D8306		B-2	③
D8307		B-2	③
D8308		C-2	③
D8309		B-2	③
D8310		B-2	③
D8311		B-2	③
D8312		A-2	③
D8313		A-2	③
D8314		A-2	③
D8315		B-2	④
D8316		B-2	④
D8317		B-2	④
D8318		B-2	③
D8319		B-2	③
D8320		A-2	③
D8321		A-2	③
D8322	A-2		③
D8323		A-1	③
D8324	A-2		③
D8325	A-2		③
D8331		D-2	③
D8332		B-1	④
D8333		B-1	③
D8334		B-1	④
D8335		B-2	④
D8336		B-1	③
D8337		D-2	③

CRYSTAL

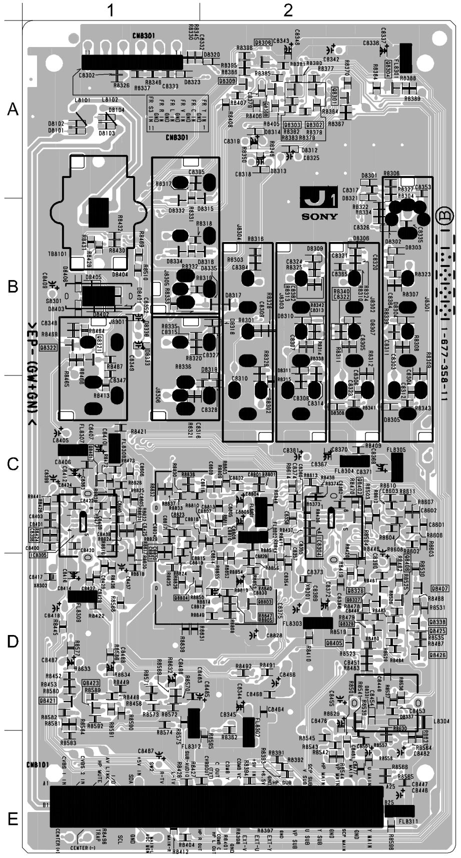
	(Component Side)	(Conductor Side)
X8301	D-1	
X8302	D-1	

✱: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

– J1 Board – (Component Side)

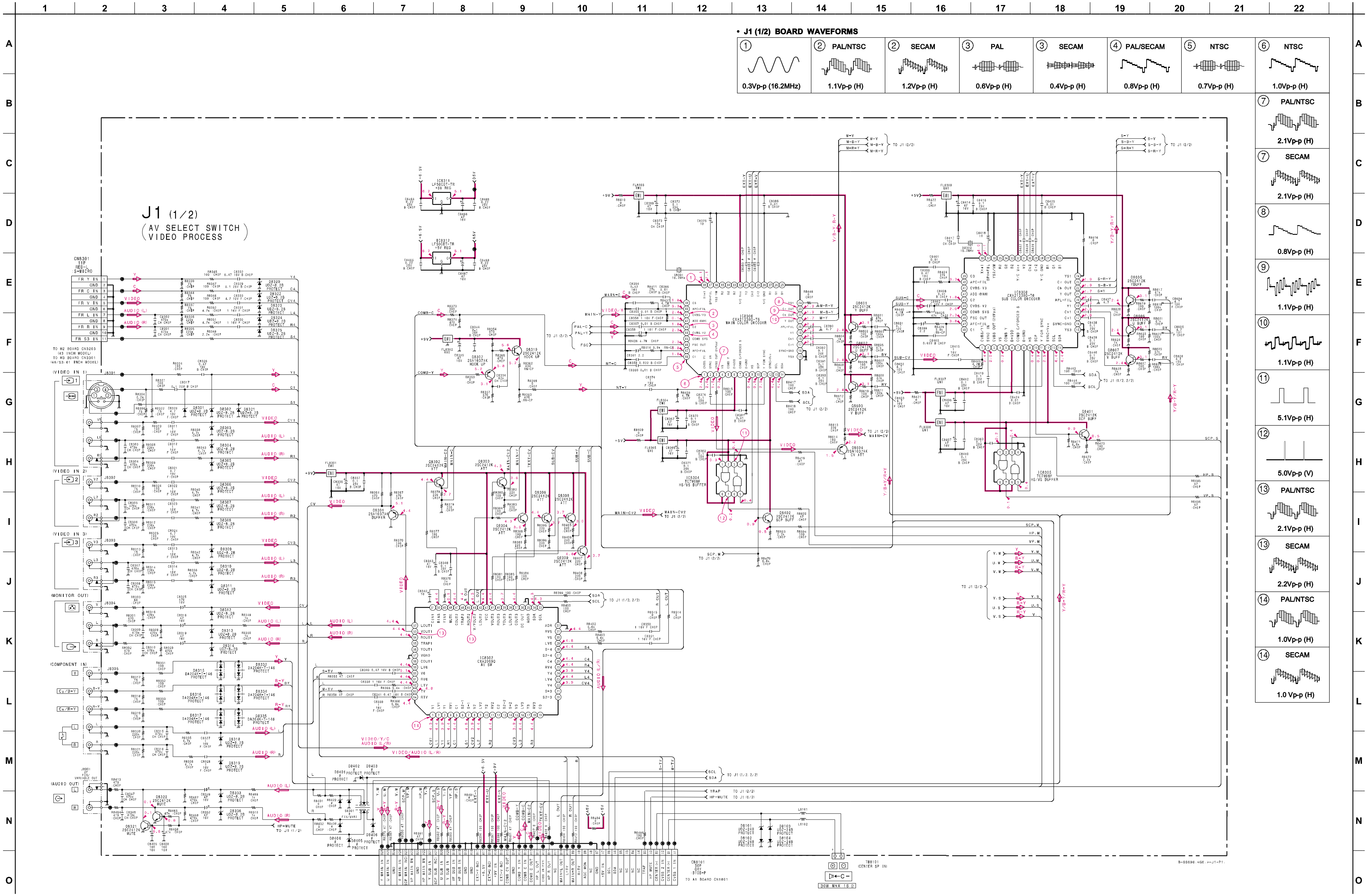


(Conductor Side)

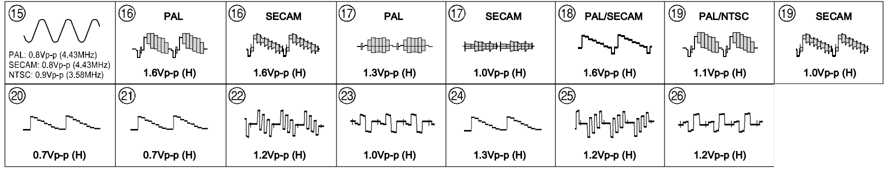


Schematic diagram
J1 (1/2) board ➡

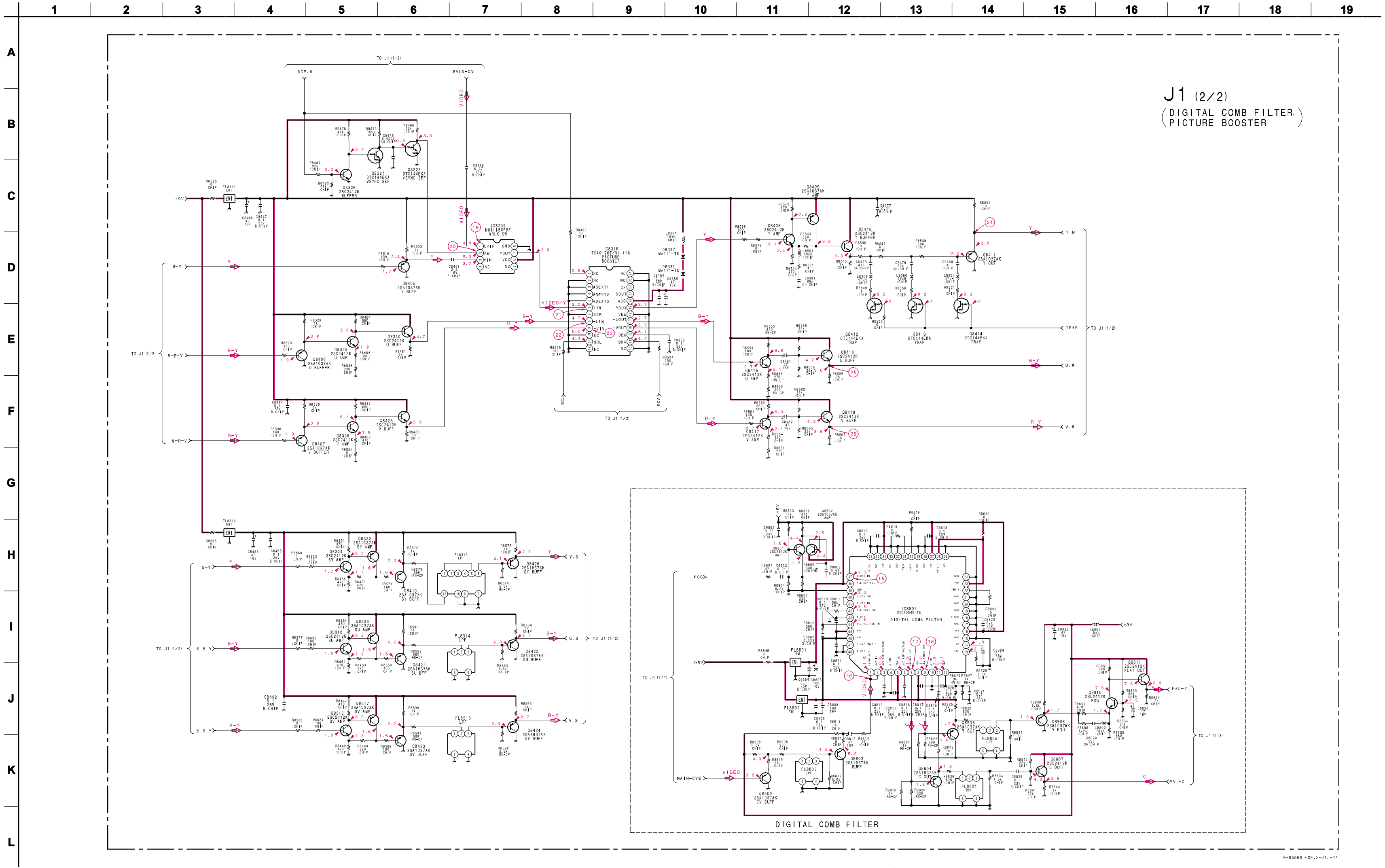
(1) Schematic Diagram of J1 (1/2) Board


• J1 (1/2) BOARD WAVEFORMS
① 0.3Vp-p (16.2MHz)
② PAL/NTSC 1.1Vp-p (H)
② SECAM 1.2Vp-p (H)
③ PAL 0.6Vp-p (H)
③ SECAM 0.4Vp-p (H)
④ PAL/SECAM 0.8Vp-p (H)
⑤ NTSC 0.7Vp-p (H)
⑥ NTSC 1.0Vp-p (H)
⑦ PAL/NTSC 2.1Vp-p (H)
⑦ SECAM 2.1Vp-p (H)
⑧ 0.8Vp-p (H)
⑨ 1.1Vp-p (H)
⑩ 1.1Vp-p (H)
⑪ 5.1Vp-p (H)
⑫ 5.0Vp-p (V)
⑬ PAL/NTSC 2.1Vp-p (H)
⑬ SECAM 2.2Vp-p (H)
⑭ PAL/NTSC 1.0Vp-p (H)
⑭ SECAM 1.0 Vp-p (H)
J1 (1/2)
(AV SELECT SWITCH VIDEO PROCESS)
CN8301
IC8306 CXA2130Q-T6 MAIN COLOR DECODER
IC8308 CXA2130Q-T6 SUB COLOR DECODER
IC8303 CXA2069Q AV SW
IC8304 TC7W08F HS/VS BUFFER
IC8305 TC7W08F HS/VS BUFFER
IC8311 LF50CDT-TR +5V REG
IC8312 LF50CDT-TR +5V REG
(VIDEO IN 1)
(VIDEO IN 2)
(VIDEO IN 3)
(MONITOR OUT)
(COMPONENT IN)
(AUDIO OUT)
CN8101
TB8101 (CENTER SP IN)
30W MAX 16Ω
TO A1 BOARD CN8801
S-SS696 <GE.>-J1-P1

- **J1 (2/2) BOARD WAVEFORMS**


⑮
PAL: 0.8Vp-p (4.43MHz)
SECAM: 0.8Vp-p (4.43MHz)
NTSC: 0.9Vp-p (3.58MHz)
⑯ PAL
1.6Vp-p (H)
⑯ SECAM
1.6Vp-p (H)
⑰ PAL
1.3Vp-p (H)
⑰ SECAM
1.0Vp-p (H)
⑱ PAL/SECAM
1.6Vp-p (H)
⑲ PAL/NTSC
1.1Vp-p (H)
⑲ SECAM
1.0Vp-p (H)
⑳
0.7Vp-p (H)
㉑
0.7Vp-p (H)
㉒
1.2Vp-p (H)
㉓
1.0Vp-p (H)
㉔
1.3Vp-p (H)
㉕
1.2Vp-p (H)
㉖
1.2Vp-p (H)

(2) Schematic Diagram of J1 (2/2) Board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D
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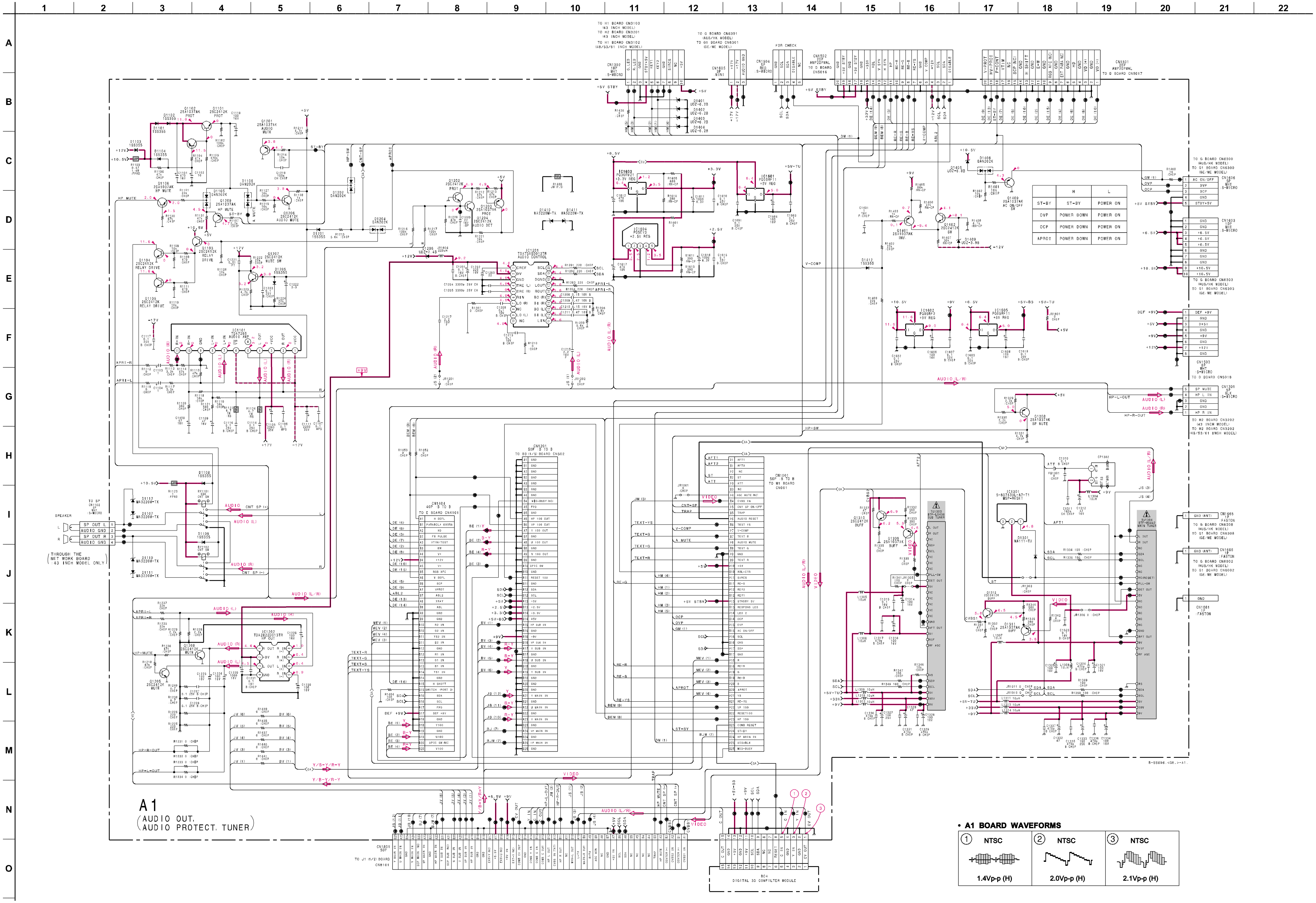
F
G
H
I
J
K
L
J1 (2/2)
DIGITAL COMB FILTER
PICTURE BOOSTER
TO J1 (1/2)
IC8309
IC8310
PICTURE BOOSTER
IC8801
DIGITAL COMB FILTER
VIDEO
Y
B-Y
R-Y
PAL-Y
PAL-C
MAIN-CV2
+9V
DIGITAL COMB FILTER

Schematic diagram
← J1 (2/2) board

Schematic diagram
A1 board →

(3) Schematic Diagram of A1 Board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21
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D
E
F
G
H
I
J
K
L
M
N
O
A1
(AUDIO OUT, AUDIO PROTECT, TUNER)
SPEAKER
THROUGH THE NET WORK BOARD 43 INCH MODEL ONLY
TO SP CN1002
IC1101 TDA7265 AUDIO AMP
IC1201 TDA7439DS13TR AUDIO CONTROL
IC1302 TDA7420D13TR HP OUT
IC1603 PQ05RF21 +3.3V REG
IC1601 PQ05RF11 +5V REG
IC1604 PQ09RF1 +2.5V REG
IC1602 PQ05RF11 +9V REG
IC1605 PQ05RF11 +5V REG
CN1201 50P TO B3 (1/2) BOARD CN502
CN1404 40P TO E BOARD CN4105
CN1601 50P TO M1 BOARD CN601
CN1831 50P TO J1 (1/2) BOARD CN8109
BC4 DIGITAL 3D COMBFILTER MODULE
TU1302 SUB TUNER
TU1304 MAIN TUNER
AUDIO (L/R)
VIDEO
ST-BY
OVP
OCP
APROT
POWER DOWN
POWER ON
B-05596 <GB.><+1>

• **A1 BOARD WAVEFORMS**

① NTSC	② NTSC	③ NTSC
1.4Vp-p (H)	2.0Vp-p (H)	2.1Vp-p (H)

• A1 BOARD SEMICONDUCTOR LOCATION

IC

	(Component Side)	(Conductor Side)
IC1101		D-3
IC1201		C-3
IC1202		C-3
IC1301		B-5
IC1601	E-2	E-4
IC1602	E-1	E-4
IC1603	E-3	E-3
IC1604	E-4	E-3
IC1605	E-1	E-5

TRANSISTOR

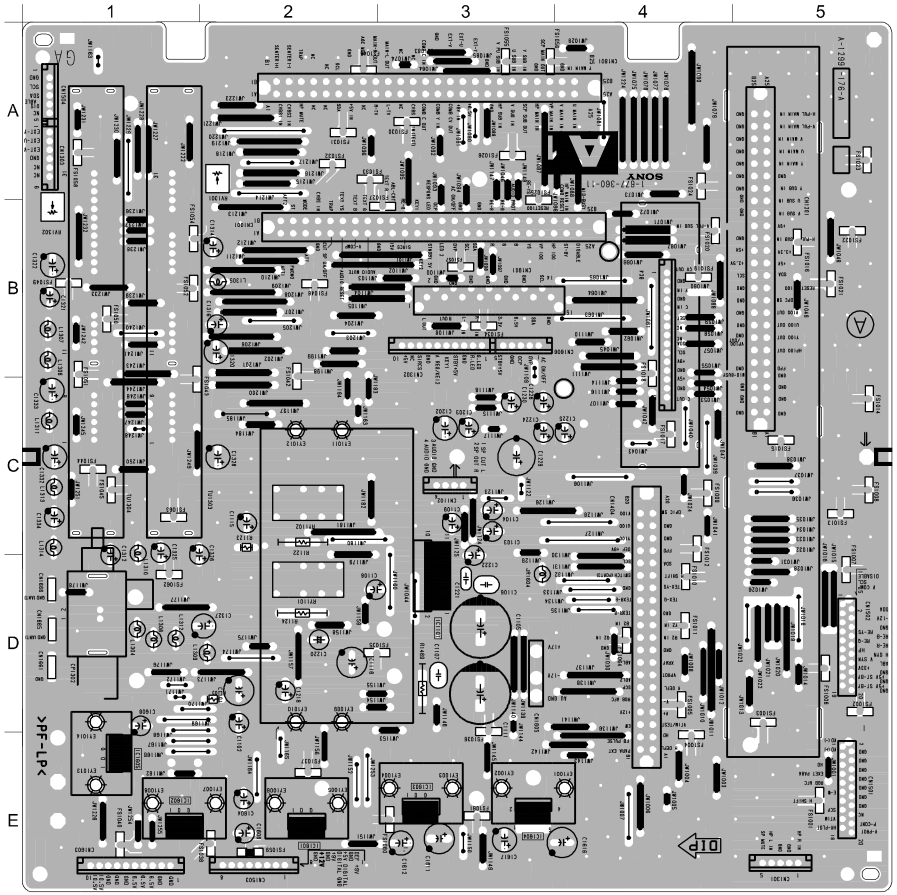
	(Component Side)	(Conductor Side)	*
Q1101		D-4	①
Q1102		D-4	①
Q1103		D-4	①
Q1104		D-4	①
Q1105		C-4	①
Q1106		D-4	①
Q1201		D-4	①
Q1202		D-4	①
Q1203		D-4	①
Q1204		D-4	①
Q1205		C-2	①
Q1206		D-4	①
Q1207		D-3	①
Q1208		C-3	①
Q1209		D-3	①
Q1308		E-2	①
Q1309		A-4	①
Q1310		B-4	①
Q1311		B-5	①
Q1312		B-5	①
Q1401		E-3	①
Q1402		E-3	①
Q1409		B-2	①

DIODE

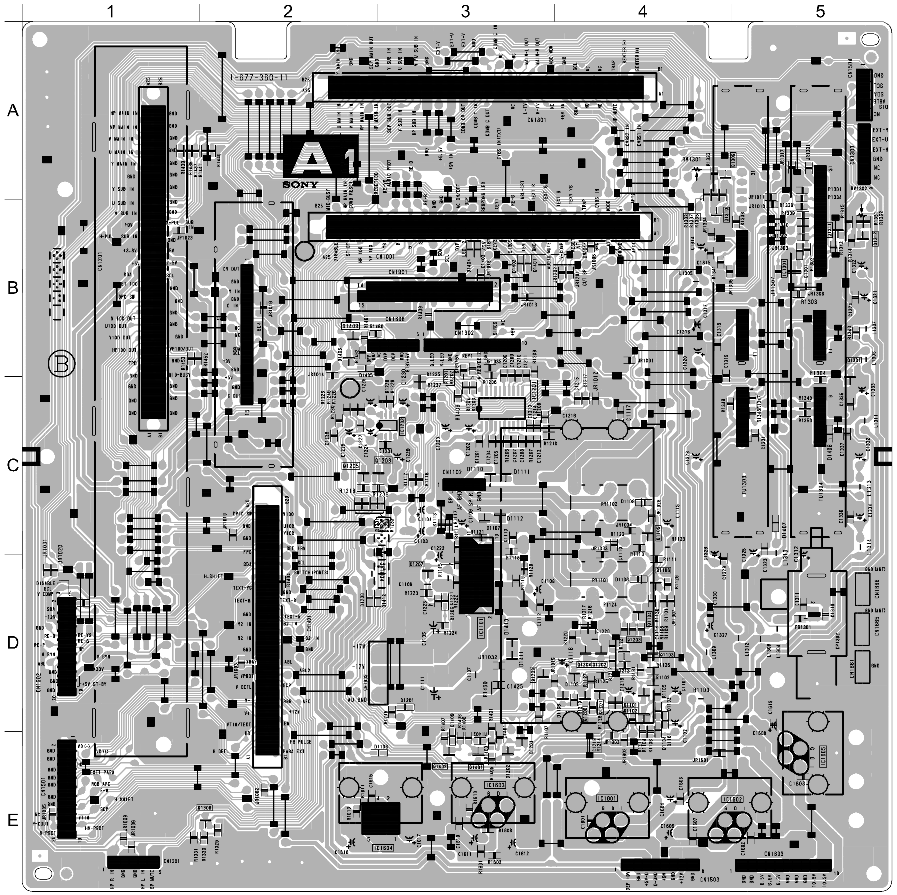
	(Component Side)	(Conductor Side)	*
D1101		D-4	③
D1102		D-4	③
D1104		D-4	③
D1105		D-4	④
D1106		D-4	④
D1107		C-3	④
D1108		D-4	③
D1109		C-4	③
D1110		C-3	④
D1111		C-3	④
D1112		C-3	④
D1201		D-3	③
D1202		E-3	④
D1204		E-3	④
D1205		D-3	③
D1206		D-2	③
D1301		B-5	③
D1401		B-3	③
D1402		B-3	③
D1403		B-3	③
D1404		B-3	③
D1405		B-2	③
D1406		B-2	④
D1409		E-3	③
D1410		D-3	③
D1411		D-3	③
D1412		D-2	③

＊: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

– A1 Board – (Component Side)



(Conductor Side)



Schematic diagram
B3 (1/5)board ➡

B3 DRC, MID-X, VIDEO PROCESS

• B3 BOARD SEMICONDUCTOR LOCATION

IC

	Component Side	Conductor Side
IC302	A-4	
IC303	A-4	
IC309		A-1
IC311	B-4	B-1
IC501	B-1	
IC504	A-2	
IC505	B-3	
IC506	B-2	
IC601	A-1	
IC602	B-1	
IC603	A-1	
IC604		B-3
IC801	B-3	
IC802	B-4	
IC803		A-2
IC901	B-2	
IC902	A-3	
IC903		A-2
IC904	A-3	

TRANSISTOR

	Component Side	Conductor Side	*
Q301		A-2	①
Q302		A-2	①
Q303		A-2	①
Q501	B-1		②
Q502	B-1		②
Q503	B-1		②
Q510	B-1		②
Q511	B-1		②
Q512	B-1		②
Q516		B-3	①
Q517		A-3	①
Q518		A-3	①
Q519		B-3	①
Q520		B-3	①
Q521	B-1		②
Q522	B-1		②
Q523	B-1		②
Q524		B-3	①
Q601		A-4	①
Q602		A-4	①
Q901		B-3	①
Q902		B-3	①
Q903		B-3	①
Q904		A-1	⑯
Q905		A-1	⑯
Q906		A-1	②
Q907	B-2		②
Q908	B-2		②
Q909	B-2		②

DIODE

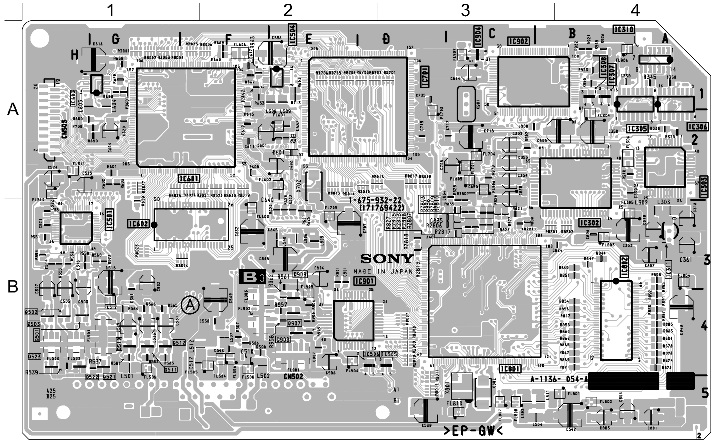
	Component Side	Conductor Side	*
D301		B-4	③
D302		B-4	③
D501		B-3	③
D601	A-2		③

CRYSTAL

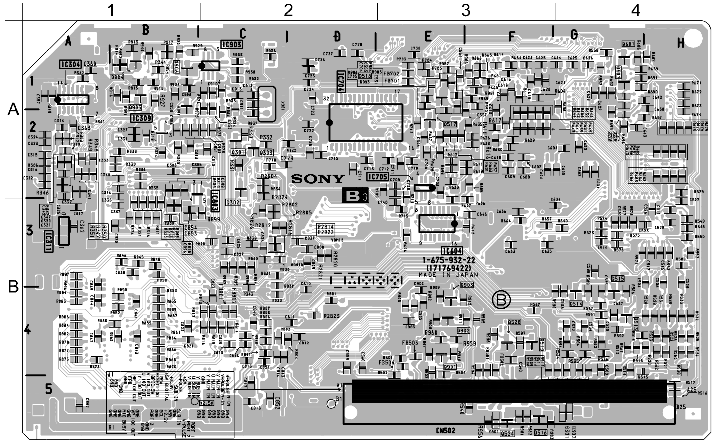
	Component Side	Conductor Side
X801	B-3	
X802	B-3	
X901	A-3	

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

– B3 Board – (Component Side)


1
2
3
4
A
B
SONY
B3
1-675-932-22 (171769422)
MADE IN JAPAN
A-1136-054-A
>EP-GW<
IC601
IC602
IC901
IC801
IC902
IC802
IC505
IC506
CN502

(Conductor Side)


1
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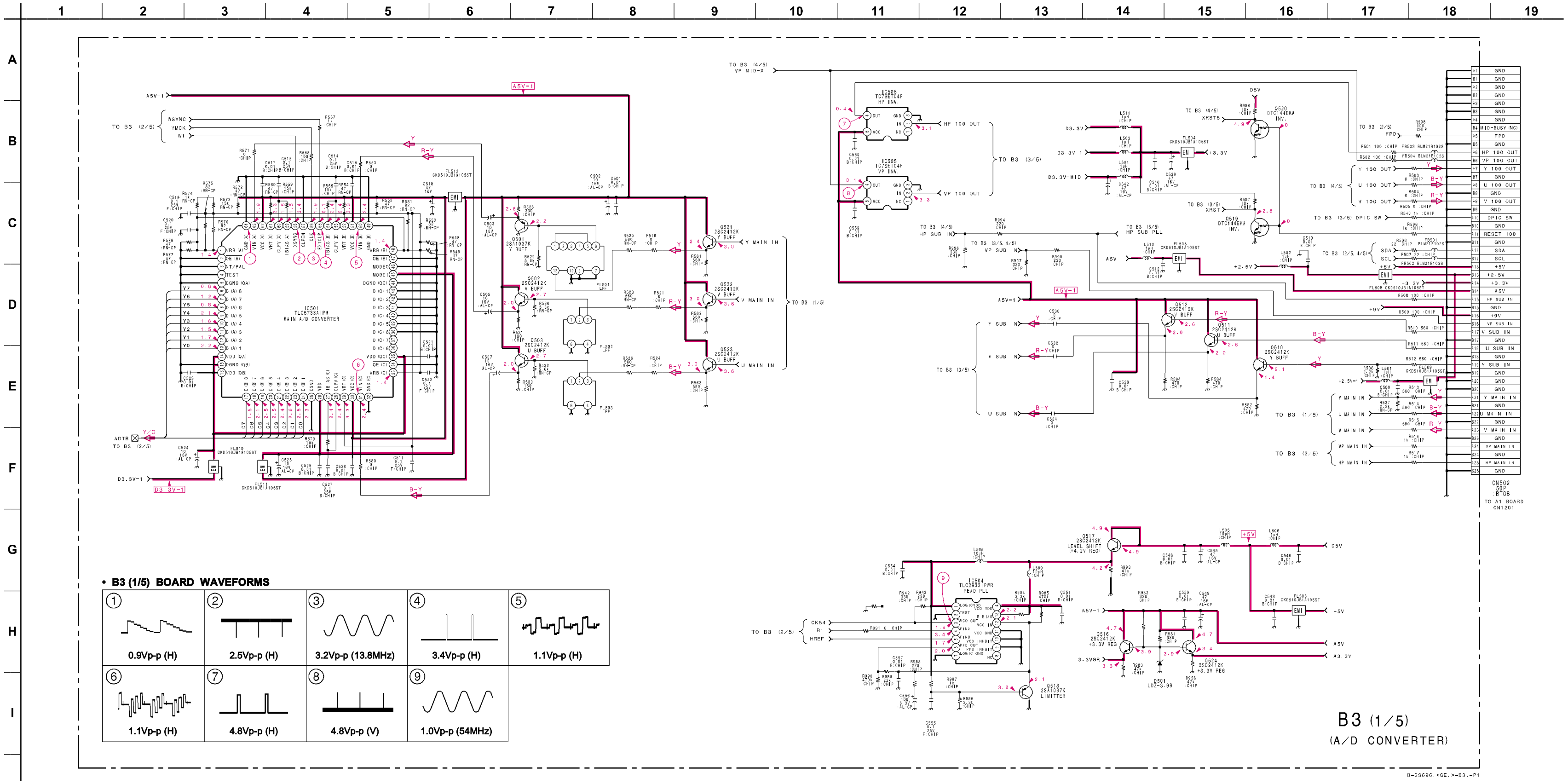
3
4
A
B
SONY
B3
1-675-932-22 (171769422)
MADE IN JAPAN
CN502

(4) Schematic Diagram of B3 (1/5) Board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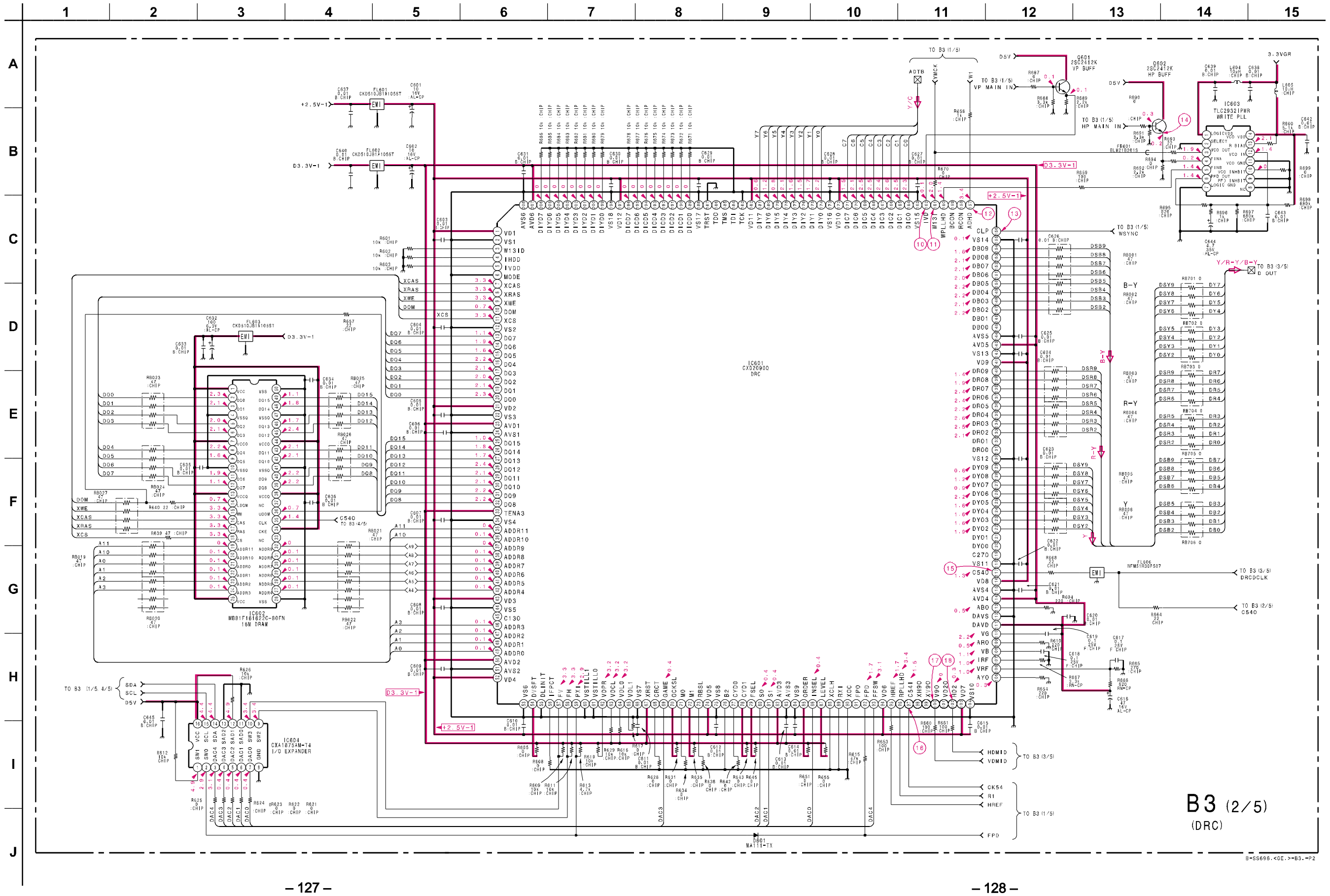
G
H
I
IC501 TLC5733AIPM MAIN A/D CONVERTER
IC504 TLC2933IPWR READ PLL
IC594 TC7SET04F HP INV.
IC595 TC7SET04F VP INV.
Q501 2SA1037K Y BUFF
Q502 2SC2412K Y BUFF
Q503 2SC2412K U BUFF
TO B3 (1/5)
TO B3 (2/5)
TO B3 (3/5)
TO B3 (4/5)
CN502 50P BTOB TO A1 BOARD CN1201
B3 (1/5) (A/D CONVERTER)

• B3 (1/5) BOARD WAVEFORMS

① 0.9Vp-p (H)
② 2.5Vp-p (H)
③ 3.2Vp-p (13.8MHz)
④ 3.4Vp-p (H)
⑤ 1.1Vp-p (H)
⑥ 1.1Vp-p (H)
⑦ 4.8Vp-p (H)
⑧ 4.8Vp-p (V)
⑨ 1.0Vp-p (54MHz)

(5) Schematic Diagram of B3 (2/5) Board



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A
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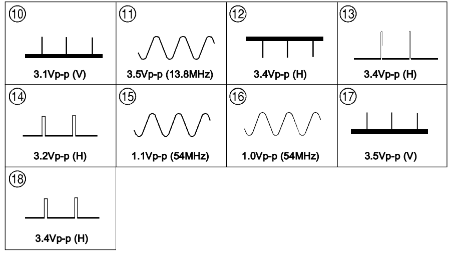
G
H
I
J
IC601
CXD2090Q
DRC
IC602
MB81F161622C-80FN
16M DRAM
IC603
TLC2932IPWR
WRITE PLL
IC604
CXA1875AM-T4
I/O EXPANDER
Q601
2SC2412K
VP BUFF
Q602
2SC2412K
HP BUFF
TO B3 (1/5)
VP MAIN IN
HP MAIN IN
WSYNC
D5V
3.3VGR
D3.3V-1
+2.5V-1
Y/C
ADTB
YMCK
W1
Y/R-Y/B-Y
TO B3 (3/5)
D OUT
B-Y
R-Y
Y
TO B3 (3/5)
DRCDCLK
C540
SDA
SCL
D5V
TO B3 (1/5, 4/5)
HDMRD
VDMRD
CK54
R4
WREF
FPD
TO B2 (1/5)
B3 (2/5)
(DRC)
B-SS696.<GE.>-B3.-P2

- **B3 (2/5) BOARD WAVEFORMS**

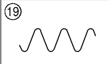


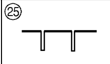
Schematic diagram
← B3 (2/5) board

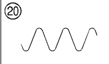
Schematic diagram
B3 (3/5) board →

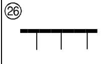
(6) Schematic Diagram of B3 (3/5) Board

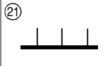
- **B3 (3/5) BOARD WAVEFORMS**

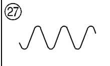
⑲

2.7Vp-p (23MHz)

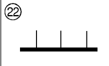
㉕

3.4Vp-p (H)

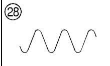
⑳

1.2Vp-p (68.7MHz)

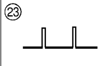
㉖

3.4Vp-p (V)

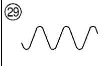
㉑

1.9Vp-p (V)

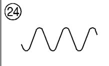
㉗

1.4Vp-p (54MHz)

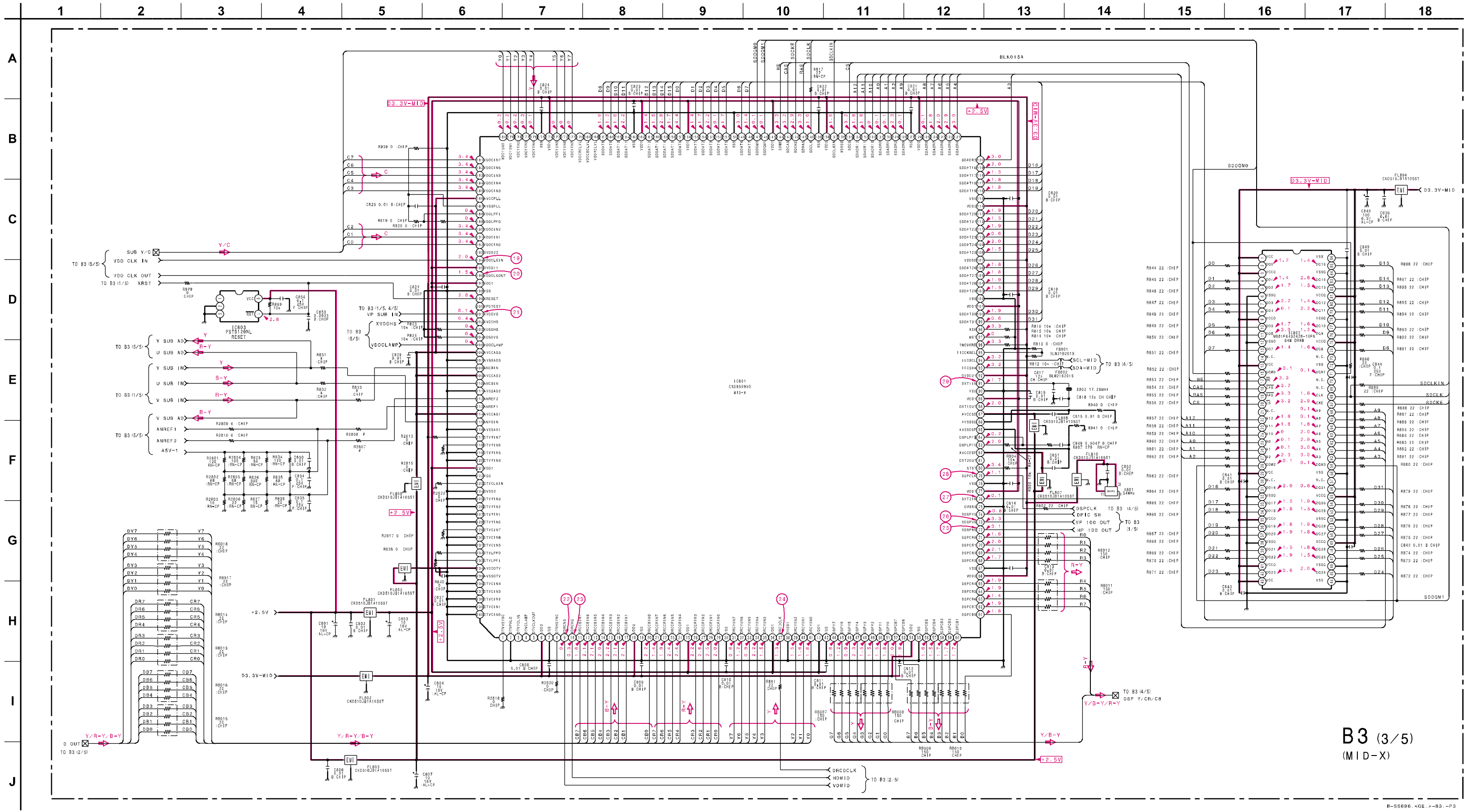
㉒

3.4Vp-p (V)

㉘

1.1Vp-p (54MHz)

㉓

3.4Vp-p (H)

㉙

1.5Vp-p (17.3MHz)

㉔

1.1Vp-p (54MHz)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D
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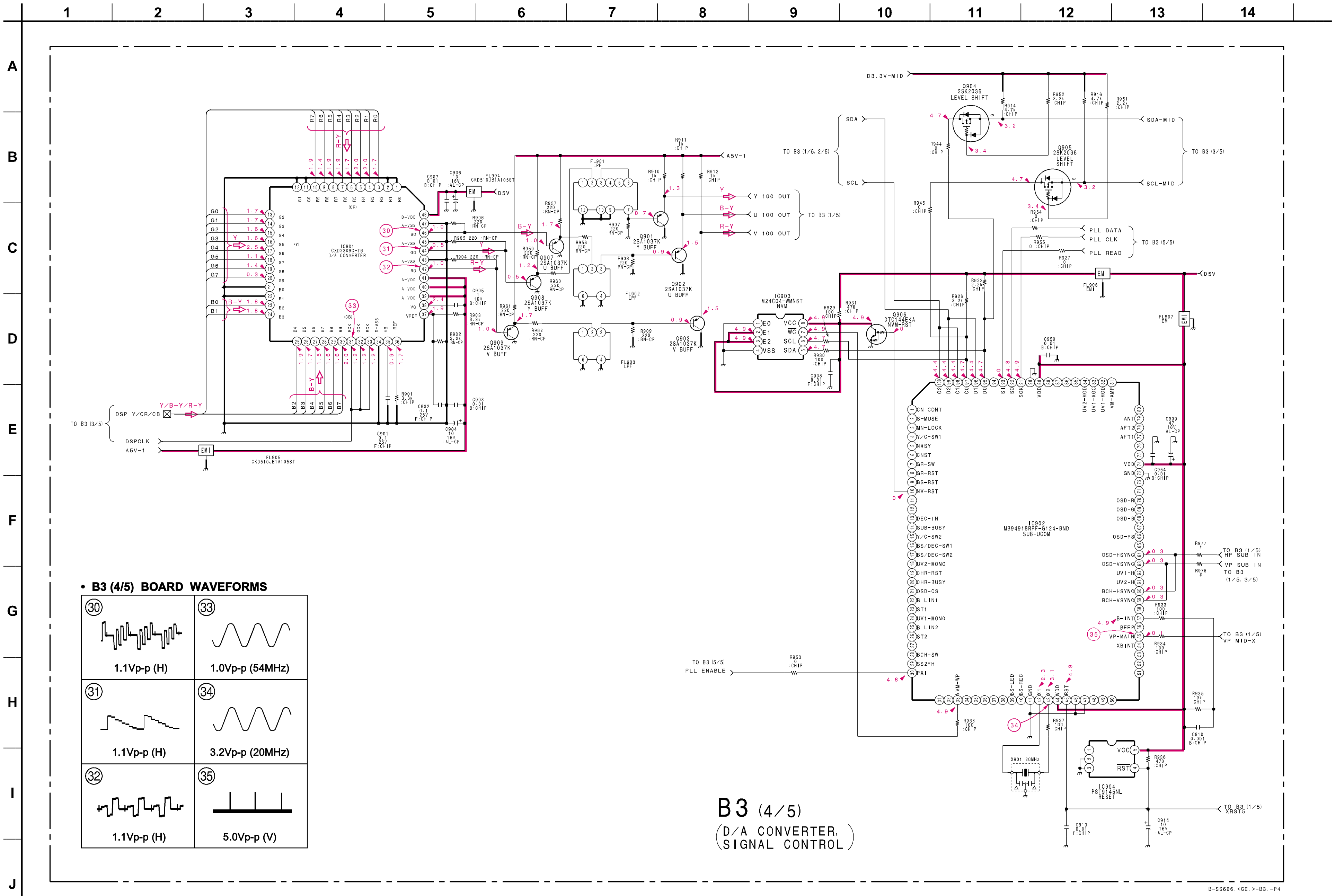
G
H
I
J
IC801
CXD3503Q
MID-X
IC803
PST9120NL
RESET
D3.3V-MID
+2.5V
BLK083A
SDDQM0
SDDQM1
SUB Y/C
VDO CLK IN
VDO CLK OUT
XRST
TO B3 (5/5)
TO B3 (1/5)
Y SUB AD
U SUB AD
Y SUB IN
U SUB IN
V SUB IN
V SUB AD
ANREF1
ANREF2
A5V-1
VP SUB IN
XVDOHS
VDOCLAMP
SCL-MID
SDA-MID
TO B3 (4/5)
DSPCLK
DPIC SR
VP 100 OUT
HP 100 OUT
TO B3 (1/5)
DRCOCLK
HDMID
VDMID
TO B3 (2/5)
TO B3 (4/5)
DSP Y/CR/CB
Y/B-Y/R-Y
Y/R-Y/B-Y
D OUT
TO B3 (2/5)
SDCLKIN
SDCLK
SDCKE
X802 17.28MHz
B3 (3/5)
(MID-X)
B-SS696.<GE.>-B3.-P3

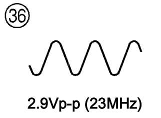
(7) Schematic Diagram of B3 (4/5) Board

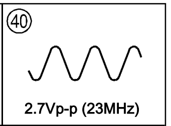

1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J
B3 (4/5)
D/A CONVERTER, SIGNAL CONTROL
IC901 CXD2309Q-T6 D/A CONVERTER
IC902 MB94918RPF-G124-BND SUB-UCOM
IC903 M24C04-WMN6T NVM
IC904 PST9145NL RESET
Q901 2SA1037K Y BUFF
Q902 2SA1037K U BUFF
Q903 2SA1037K V BUFF
Q904 2SK2036 LEVEL SHIFT
Q905 2SK2036 LEVEL SHIFT
Q906 DTC144EKA NVM-RST
Q907 2SA1037K U BUFF
Q908 2SA1037K Y BUFF
Q909 2SA1037K V BUFF
FL901 LPF
FL902 LPF
FL903 LPF
FL904 CKD510JB1A105ST
FL905 CKD510JB1A105ST
X901 20MHz
D3.3V-MID
A5V-1
D5V
SDA
SCL
SDA-MID
SCL-MID
TO B3 (1/5, 2/5)
TO B3 (3/5)
TO B3 (1/5)
TO B3 (5/5)
Y 100 OUT
U 100 OUT
V 100 OUT
PLL DATA
PLL CLK
PLL READ
PLL ENABLE
DSP Y/CR/CB
DSPCLK
Y/B-Y/R-Y
HP SUB IN
VP SUB IN
VP MID-X
XRST5
CN CONT
S-MUSE
MN-LOCK
Y/C-SW1
NASY
CNST
GR-SW
GR-RST
BS-RST
NV-RST
DEC-IN
SUB-BUSY
Y/C-SW2
BS/DEC-SW1
BS/DEC-SW2
UV2-MONO
CHR-RST
CHR-BUSY
OSD-CS
BILIN1
ST1
UV1-MONO
BILIN2
ST2
BCH-SW
SS2FH
PXI
ANT
AFT2
AFT1
VDD
GND
OSD-R
OSD-G
OSD-B
OSD-YS
OSD-HSYNC
OSD-VSYNC
UV1-H
UV2-H
CHR-HSYNC
BCH-VSYNC
B-INT
BEEP
VP-MAIN
XBINT
VCC
RST
E0 E1 E2 VSS VCC WC SCL SDA
30 31 32 33 34 35
B-SS696.<GE.>-B3.-P4

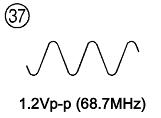
• B3 (4/5) BOARD WAVEFORMS

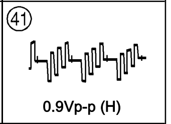
㉚ 1.1Vp-p (H)	㉝ 1.0Vp-p (54MHz)
㉛ 1.1Vp-p (H)	㉞ 3.2Vp-p (20MHz)
㉜ 1.1Vp-p (H)	㉟ 5.0Vp-p (V)

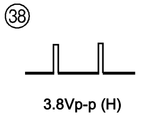
• B3 (5/5) BOARD WAVEFORMS

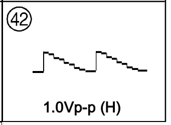

2.9Vp-p (23MHz)

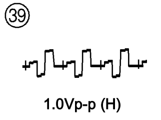

2.7Vp-p (23MHz)


1.2Vp-p (68.7MHz)

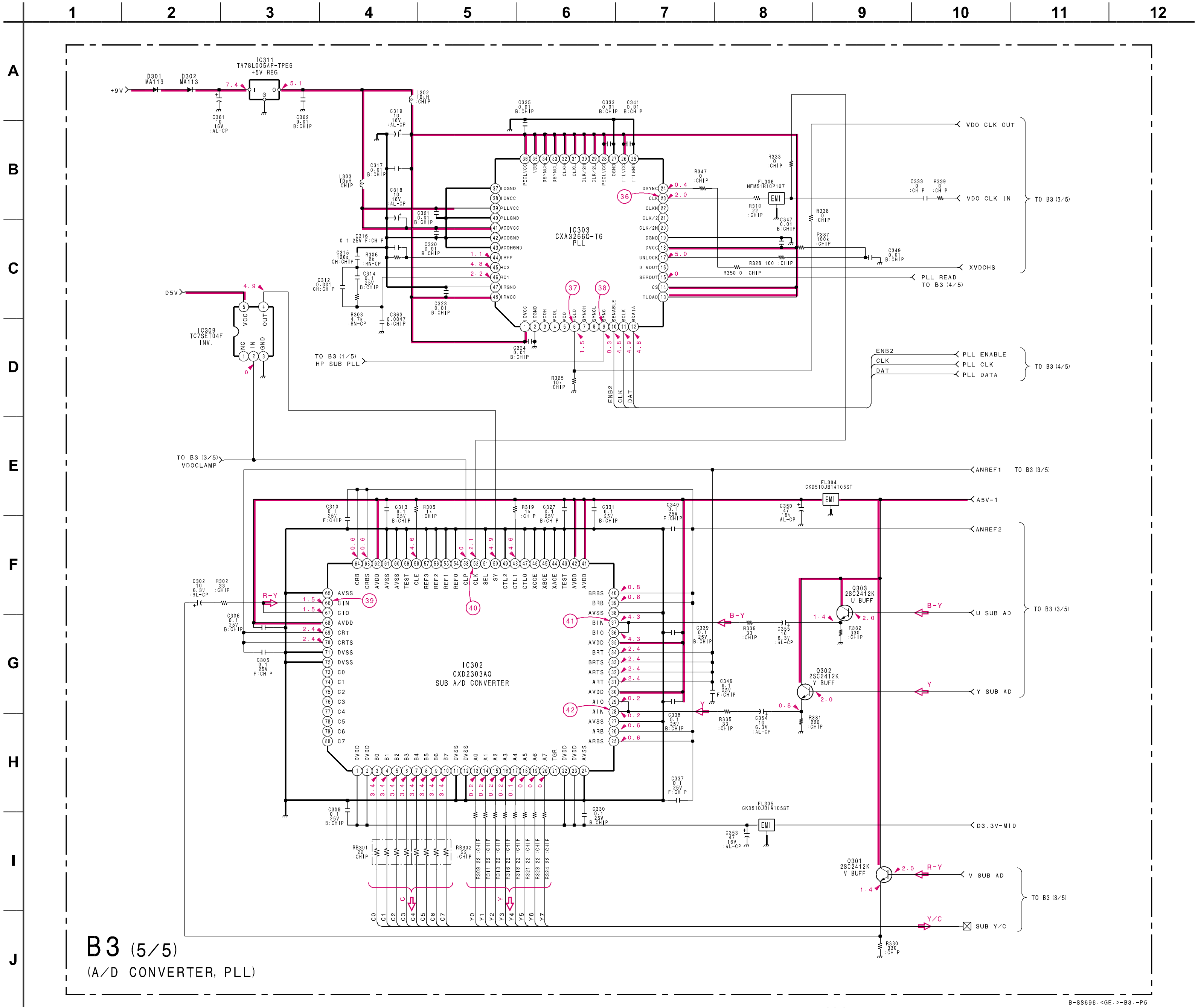

0.9Vp-p (H)


3.8Vp-p (H)


1.0Vp-p (H)


1.0Vp-p (H)

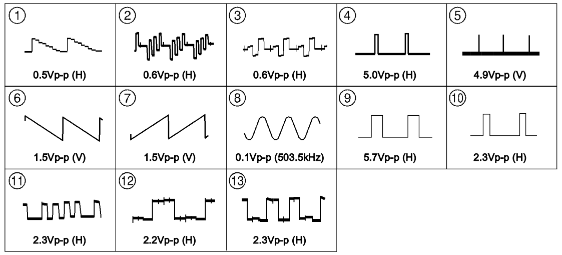
(8) Schematic Diagram of B3 (5/5) Board


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
J
IC311 TA78L005AP-TPE6 +5V REG
D301 MA113
D302 MA113
+9V
L302 10μH CHIP
IC303 CXA3266Q-T6 PLL
IC309 TC7SET04F INV.
D5V
TO B3 (1/5) HP SUB PLL
TO B3 (3/5) VDOCLAMP
VDO CLK OUT
VDO CLK IN
XVDOHS
PLL READ TO B3 (4/5)
TO B3 (3/5)
FL306 NFM51R10P107
ENB2
CLK
DAT
PLL ENABLE
PLL CLK
PLL DATA
TO B3 (4/5)
ANREF1
A5V-1
ANREF2
FL304 CKD510JB1A105ST
IC302 CXD2303AQ SUB A/D CONVERTER
Q303 2SC2412K U BUFF
Q302 2SC2412K Y BUFF
Q301 2SC2412K V BUFF
U SUB AD
Y SUB AD
V SUB AD
SUB Y/C
D3.3V-MID
FL305 CKD510JB1A105ST
R-Y
B-Y
Y
Y/C
C
RB301 22 CHIP
RB302 22 CHIP
C0 C1 C2 C3 C4 C5 C6 C7
Y0 Y1 Y2 Y3 Y4 Y5 Y6 Y7
B3 (5/5)
(A/D CONVERTER, PLL)

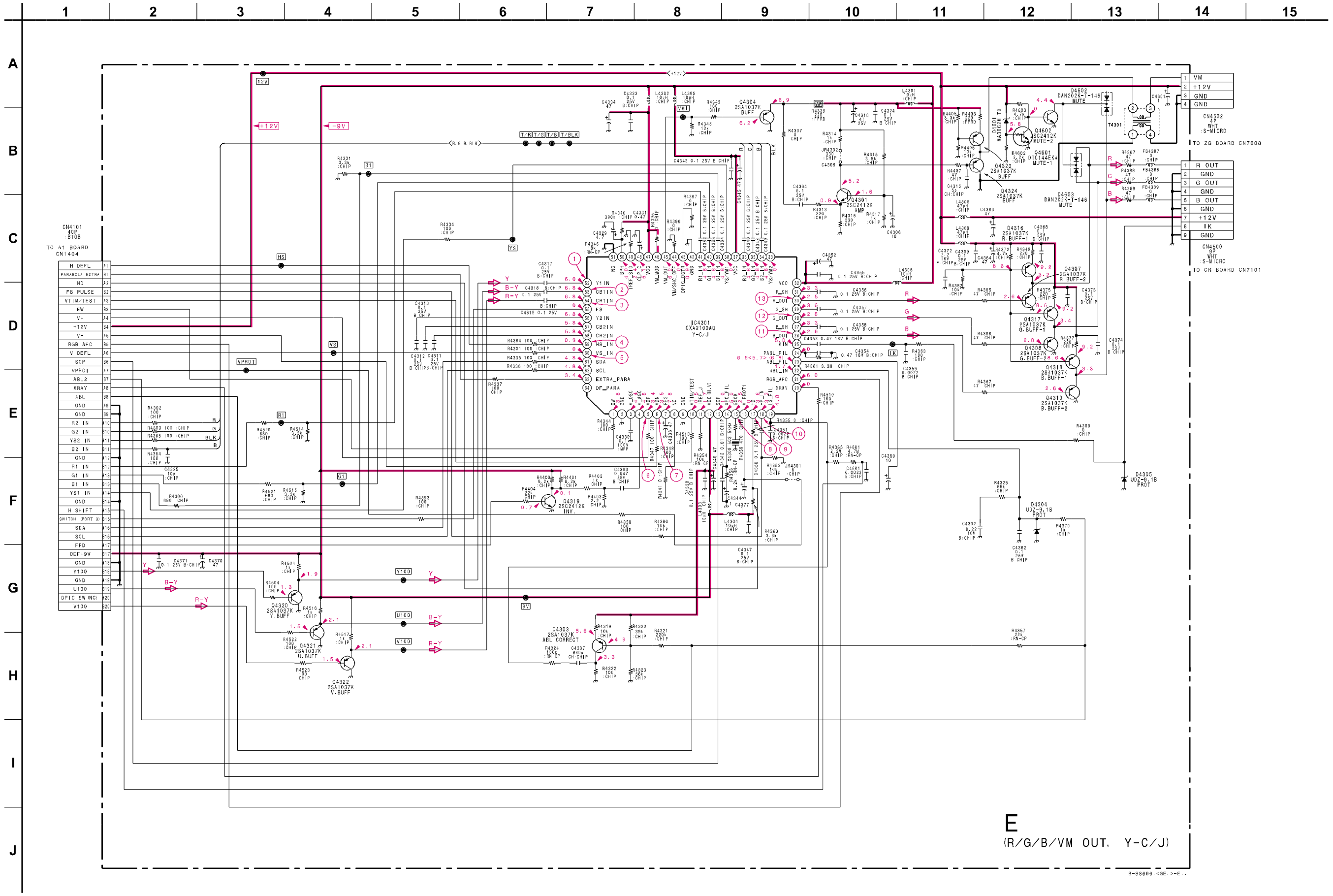
Schematic diagram

← B3 (4/5) board

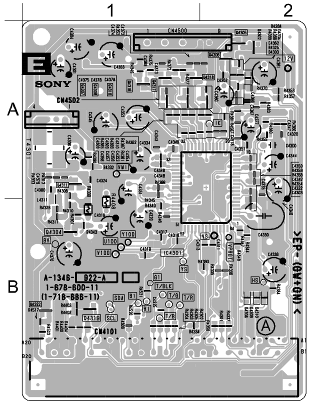
- **E BOARD WAVEFORMS**



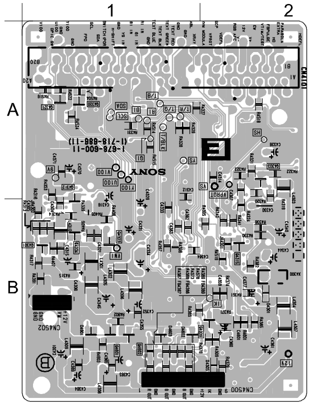
(9) Schematic Diagram of E Board


IC4301
CXA2100AQ
Y-C/J
TO A1 BOARD CN1404
TO ZG BOARD CN7608
TO CN BOARD CN7101
E
(R/G/B/VM OUT, Y-C/J)

– E Board – (Component Side)



(Conductor Side)



- **E BOARD SEMICONDUCTOR LOCATION**

IC

	(Component Side)	(Conductor Side)
IC4301	A-2	

TRANSISTOR

	(Component Side)	(Conductor Side)	*
Q4301		B-1	①
Q4303		A-2	①
Q4304	B-1		②
Q4307	A-1		②
Q4308	A-1		②
Q4310	A-2		②
Q4316	A-1		②
Q4317	A-1		②
Q4318	A-1		②
Q4319	B-1		②
Q4320		A-1	①
Q4321		A-1	①
Q4322	B-1		②
Q4323		B-1	①
Q4324		B-1	①
Q4601		B-1	①
Q4602		B-1	①

DIODE

	(Component Side)	(Conductor Side)	*
D4304	A-2		③
D4305		B-2	③
D4601		B-1	④
D4602		B-1	④
D4603		B-1	④

CRYSTAL

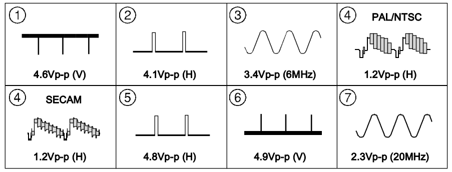
	(Component Side)	(Conductor Side)
X4300		B-2

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

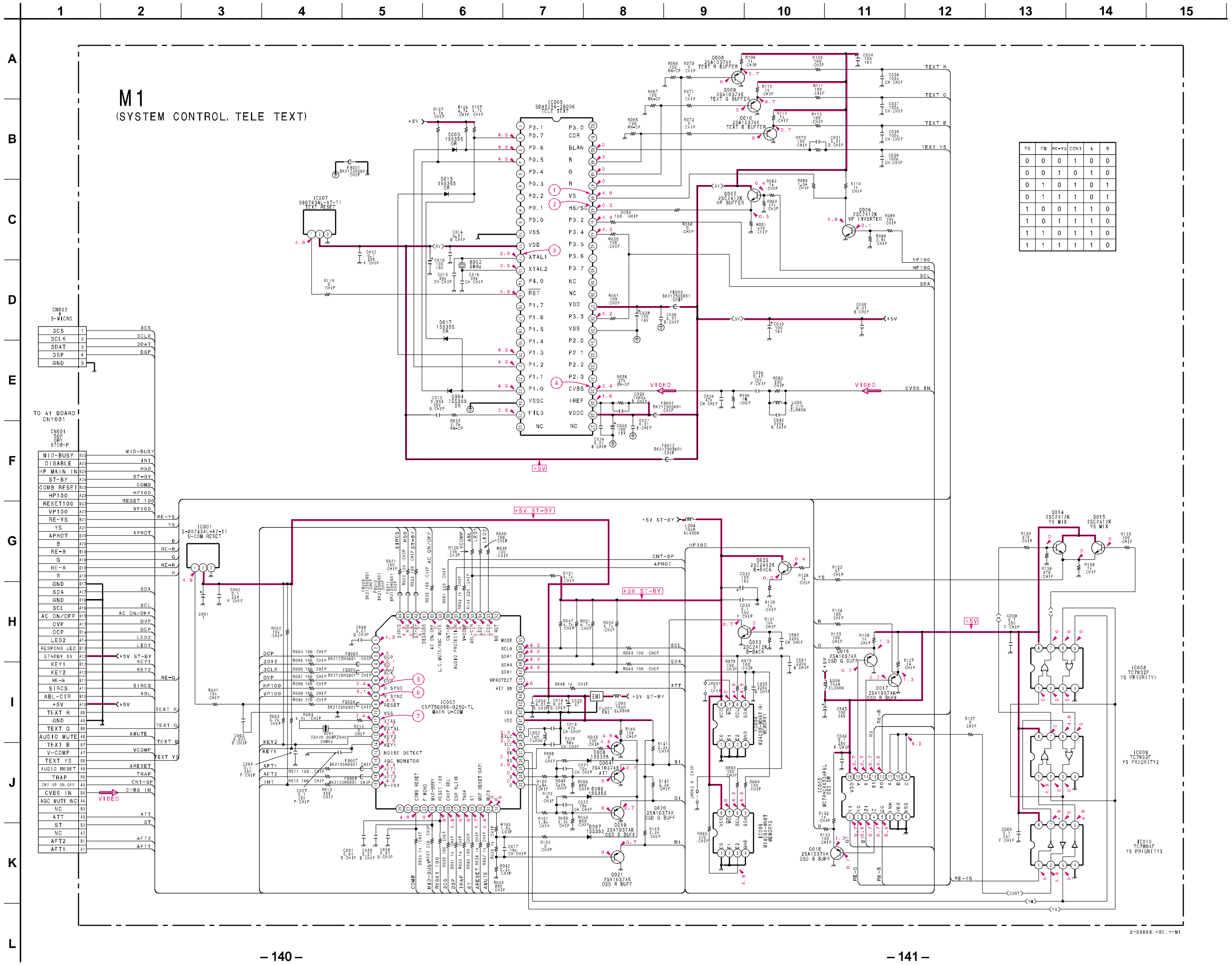
Schematic diagram
← E board

Schematic diagram
M1 board →

- **M1 BOARD WAVEFORMS**

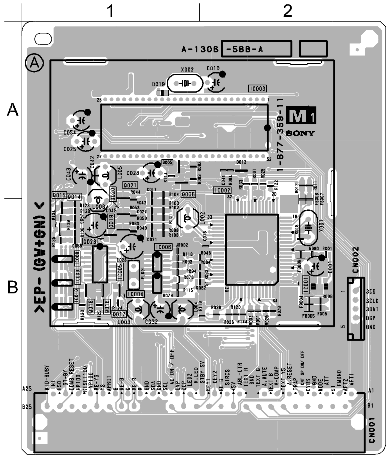

①
4.6Vp-p (V)
②
4.1Vp-p (H)
③
3.4Vp-p (6MHz)
④ PAL/NTSC
1.2Vp-p (H)
④ SECAM
1.2Vp-p (H)
⑤
4.8Vp-p (H)
⑥
4.9Vp-p (V)
⑦
2.3Vp-p (20MHz)

(10) Schematic Diagram of M1 Board

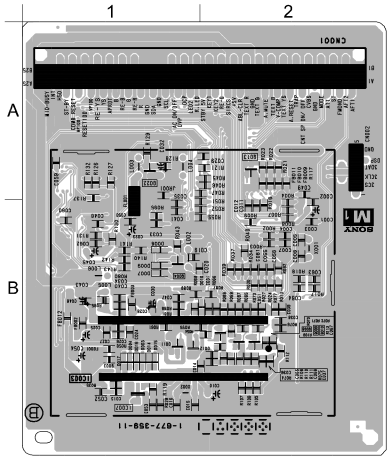

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K L
M1
(SYSTEM CONTROL, TELE TEXT)
CN002 # :S-MICRO
3CS
3CLK
3DAT
DSP
GND
TO A1 BOARD CN1001
CN001 50P GRY :BTOB-P
MID-BUSY
DISABLE
HP MAIN IN
ST-BY
COMB RESET
HP100
RESET100
VP100
RE-YS
YS
APROT
B
RE-B
G
RE-R
R
GND
SDA
GND
SCL
AC ON/OFF
OVP
OCP
LED2
RESPONS LED
STADBY 5V
KEY1
KEY2
RE-G
SIRCS
ABL-CTR
+5V
TEXT R
GND
TEXT G
AUDIO MUTE
TEXT B
V-COMP
TEXT YS
AUDIO RESET
TRAP
CNT SP ON/OFF
CVBS IN
AGC MUTE (NC)
NC
ATT
ST
NC
AFT2
AFT1
+5V ST-BY
VIDEO
IC003 SDA5254-2B006 TELE TEXT
P3.1 P0.7 P0.6 P0.5 P0.4 P0.3 P0.2 P0.1 P0.0 VSS VDD XTAL1 XTAL2 P4.0 RST P1.7 P1.6 P1.5 P1.4 P1.3 P1.2 P1.1 P1.0 VSSC FIL3 NC
P3.0 COR BLAN B G R VS HS/SC P3.2 P3.4 P3.5 P3.6 P3.7 NC NC VDD P3.3 VSS P2.0 P2.1 P2.2 P2.3 CVBS IREF VDDC NC
IC001 S-80743AL-A7-T1 U-COM RESET
IC002 CXP750096-025Q-TL MAIN U-COM
IC007 S8074AL-A7-T1 TEXT RESET
IC008 TC7W53F YS PRIORITY1
IC009 TC7W53F YS PRIORITY2
IC010 TC7W53F YS PRIORITY3
IC005 M24C08-MN6T(B) MEMORY
IC006 M24C08-MN6T(B) MEMORY2
IC004 MC74HC4066F
X001 20MHz
X002 6MHz
TEXT R
TEXT G
TEXT B
TEXT YS
VIDEO
CVBS IN
+5V
+5V ST-BY

YS	YM	RE-YS	CONT	A	B
0	0	0	1	0	0
0	0	1	0	1	0
0	1	0	1	0	1
0	1	1	1	0	1
1	0	0	1	1	0
1	0	1	1	1	0
1	1	0	1	1	0
1	1	1	1	1	0

– M1 Board – (Component Side)


1
2
A
B
A-1306-588-A
1-677-359-11
M1
SONY
CN001
CN002
IC003
IC002
IC001

(Conductor Side)


1
2
A
B
CN001
CN002
M1
SONY
1-677-359-11

- **M1 BOARD SEMICONDUCTOR LOCATION**

IC	(Component Side)	(Conductor Side)
IC001	B-2	
IC002	B-2	
IC003	A-1	B-1
IC004	B-1	
IC005	B-1	
IC006	B-1	
IC007		B-1
IC008	B-1	
IC009	B-1	
IC010	B-1	

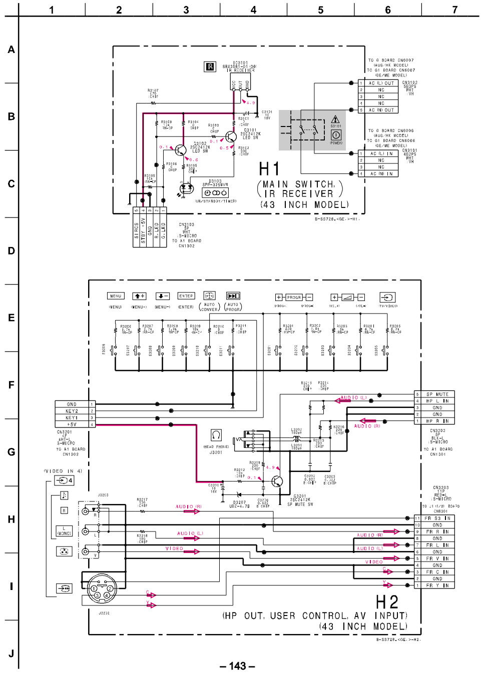
TRANSISTOR	(Component Side)	(Conductor Side)	*
Q004		B-2	①
Q005	A-1		②
Q006	A-1		②
Q008		B-2	①
Q009		B-2	①
Q010		B-2	①
Q014	B-1		②
Q015	B-1		②
Q016	B-1		②
Q017	B-1		②
Q018	B-1		②
Q019	B-1		②
Q020	B-1		②
Q021	A-1		②
Q022		A-1	①
Q023	B-1		②

DIODE	(Component Side)	(Conductor Side)	*
D003		A-2	③
D004		A-2	③
D007		A-2	③
D008		A-2	③
D009		A-2	③
D015		A-2	③
D017		A-2	③

CRYSTAL	(Component Side)	(Conductor Side)
X001	B-2	
X002	A-1	

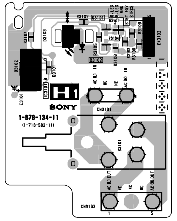
***: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)**

(11) Schematic Diagrams of H1, H2 Boards (KP-ES43)


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
H1
(MAIN SWITCH, IR RECEIVER)
(43 INCH MODEL)
H2
(HP OUT, USER CONTROL, AV INPUT)
(43 INCH MODEL)
AUDIO (R)
AUDIO (L)
VIDEO

H1 [MAIN SWITCH, IR RECEIVER] **H2** [HP OUT, USER CONTROL, AV INPUT]

– H1 BOARD – (KP-ES43)

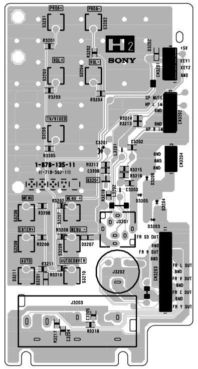

H1
SONY
1-678-134-11
CN3101
CN3102
CN3103

H1 BOARD
Terminal name of semiconductors in silk screen printed circuit (✱)

Ref.	✱
D3103	③
Q3101, 3102	①

✱: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

– H2 BOARD – (KP-ES43)

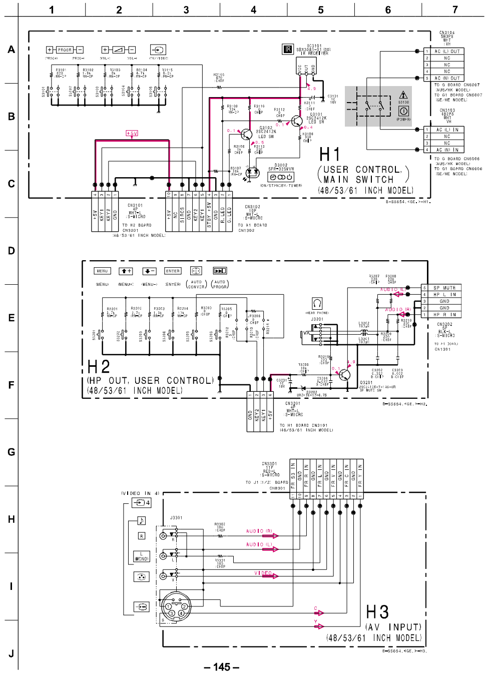

H2
SONY
1-678-135-11
J3201
J3202
J3203

H2 BOARD
Terminal name of semiconductors in silk screen printed circuit (✱)

Ref.	✱
D3207	③
Q3201	①

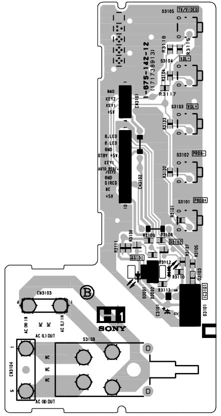
✱: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

(12) Schematic Diagrams of H1, H2 and H3 Boards (KP-ES48/53/61)


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
H1
(USER CONTROL, MAIN SWITCH)
(48/53/61 INCH MODEL)
H2
(HP OUT, USER CONTROL)
(48/53/61 INCH MODEL)
H3
(AV INPUT)
(48/53/61 INCH MODEL)

H1 [USER CONTROL, MAIN SWITCH] **H2** [HP OUT, USER CONTROL] **H3** [AV INPUT]

– H1 BOARD – (KP-ES48/53/61)

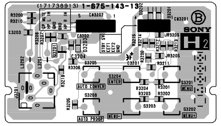

H1
SONY
1-675-142-12
CN3103
CN3101

H1 BOARD
Terminal name of semiconductors in silk screen printed circuit (✱)

Ref.	✱
Q3101, Q3102	①

✱: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

– H2 BOARD – (KP-ES48/53/61)

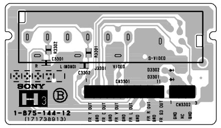

H2
SONY
1-675-143-13
S3201
MENU
S3202
MENU+
S3203
S3204
ENTER
S3205
AUTO CONVER
S3206
AUTO PROGR
MENU-
J3201

H2 BOARD
Terminal name of semiconductors in silk screen printed circuit (✱)

Ref.	✱
D3203	③
Q3201	①

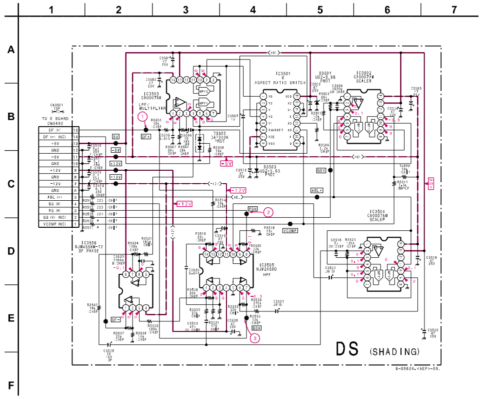
✱: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

– H3 BOARD – (KP-ES48/53/61)

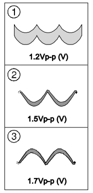

H3
SONY
1-675-144-12
CN3301
S-VIDEO
VIDEO

DS [SHADING]

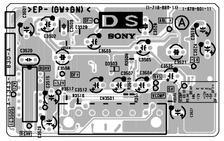
(13) Schematic Diagram of DS Board


1
2
3
4
5
6
7
A
B
C
D
E
F
IC3501
ASPECT RATIO SWITCH
IC3502
CA0007AM
SCALER
IC3503
CA0007AM
IC3504
CA0007AM
SCALER
IC3505
NJM2904
AMP
IC3506
NJM2904
D3501
UDZ-5.6B
PROT
DS (SHADING)

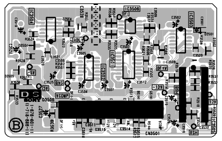
- **DS BOARD WAVEFORMS**



– DS BOARD – (Component Side)


DS
SONY
EP-
DV+DN
Ⓐ
IC3501

(Conductor Side)


DS
SONY
Ⓑ
CN3501
IC3505
VCOMP
-5V
5V
12V
-12V
DF+V
RSH
BVS

DS BOARD
Terminal name of semiconductors in silk screen printed circuit (＊)

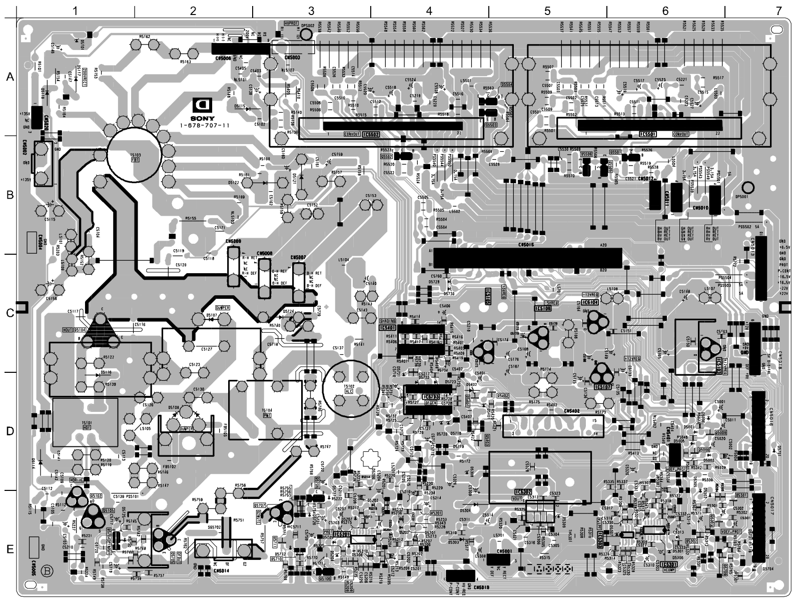
Ref.	＊
D3501, D3503	③
D3502	⑩

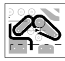
＊: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

Schematic diagrams
H₁ **H₂**
← **H₁** **H₂** **H₃** boards

D [H/V-DEF, HV, DY DRIVE]

– D BOARD –


1
2
3
4
5
6
7
A
B
C
D
E
SONY
1-878-707-11
Ⓑ
CN5001
CN5014
IC5501
IC5502
IC5401



NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

- **D BOARD SEMICONDUCTOR LOCATION**

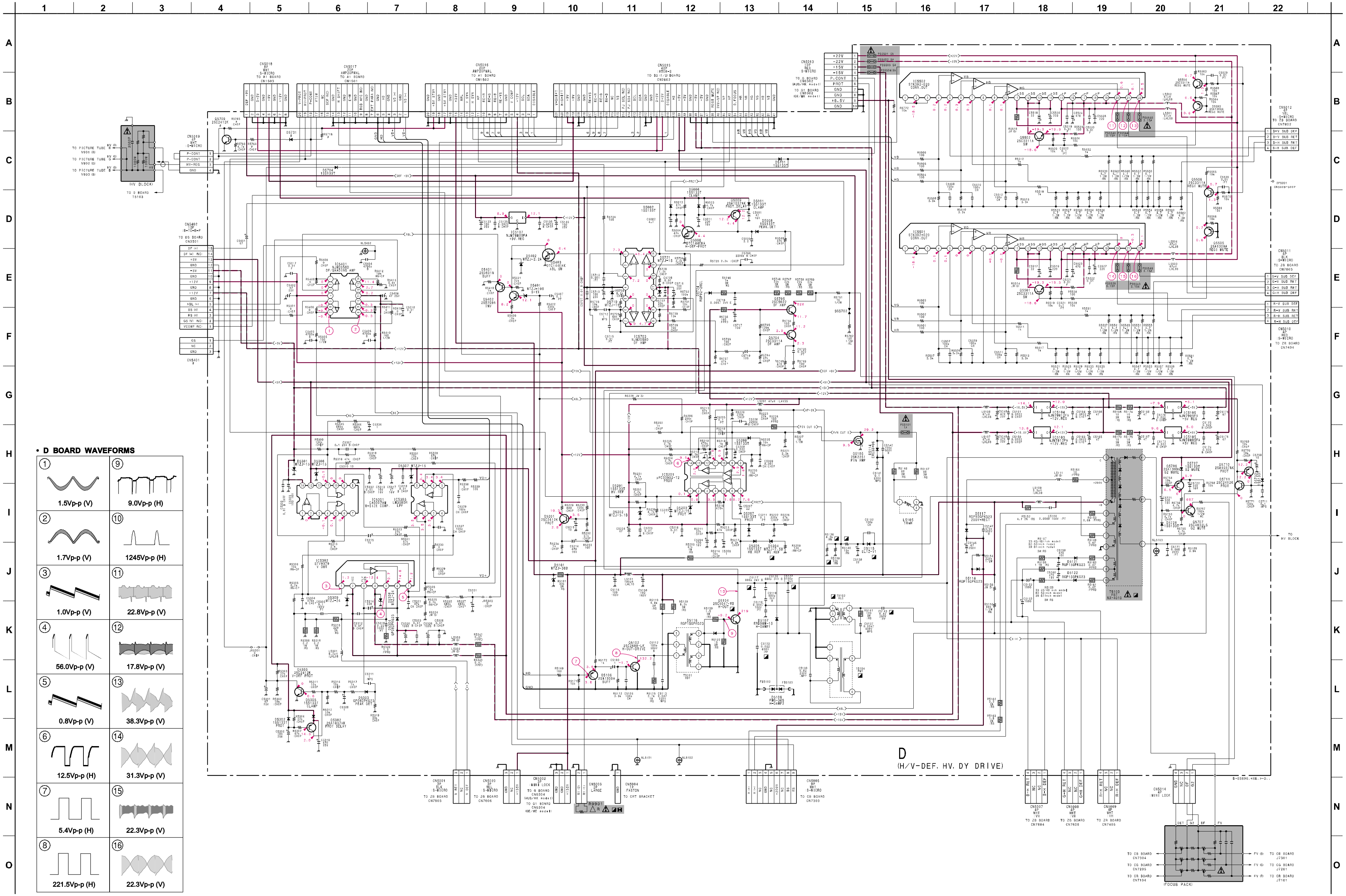
IC		
IC5103	C-6	
IC5104	C-5	
IC5105	C-4	
IC5106	C-5	
IC5107	D-5	
IC5201	E-3	
IC5301	E-6	
IC5302	E-5	
IC5303	E-6	
IC5401	C-4	
IC5501	A-6	
IC5502	A-3	
IC5703	D-4	

TRANSISTOR		＊
Q5006	D-6	①
Q5009	D-6	①
Q5102	E-1	–
Q5104	C-1	–
Q5105	E-1	–
Q5106	E-3	–
Q5201	E-4	①
Q5302	E-6	①
Q5303	E-6	①
Q5401	D-4	①
Q5402	D-5	①
Q5403	D-4	①
Q5501	B-6	–
Q5502	B-4	–
Q5503	A-5	–
Q5504	A-5	–
Q5505	B-5	–
Q5506	B-5	–
Q5704	E-1	–
Q5705	E-2	–
Q5706	E-3	–
Q5707	E-3	–
Q5710	E-3	①
Q5711	E-3	①

DIODE		＊
D5001	D-6	–
D5002	D-6	–
D5006	D-6	–
D5008	D-6	–
D5101	A-1	–
D5107	C-2	–
D5108	D-2	–
D5114	D-1	–
D5115	A-2	–
D5116	D-1	–
D5117	A-1	–
D5118	A-1	–
D5121	B-3	–
D5122	B-3	–
D5201	E-4	–
D5202	E-4	–
D5203	E-4	–
D5204	E-3	–
D5205	E-3	–
D5207	E-3	–
D5208	E-3	–
D5301	E-6	–
D5302	E-6	–
D5303	E-4	–
D5304	E-4	–
D5305	E-6	–
D5306	E-6	–
D5307	E-6	–
D5308	D-4	–
D5309	E-5	–
D5401	D-4	–
D5402	D-4	–
D5701	D-7	–
D5704	E-7	–
D5719	D-4	–
D5721	D-4	–
D5724	C-3	–
D5726	E-3	–
D5727	E-3	–
D5732	E-3	–

＊: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

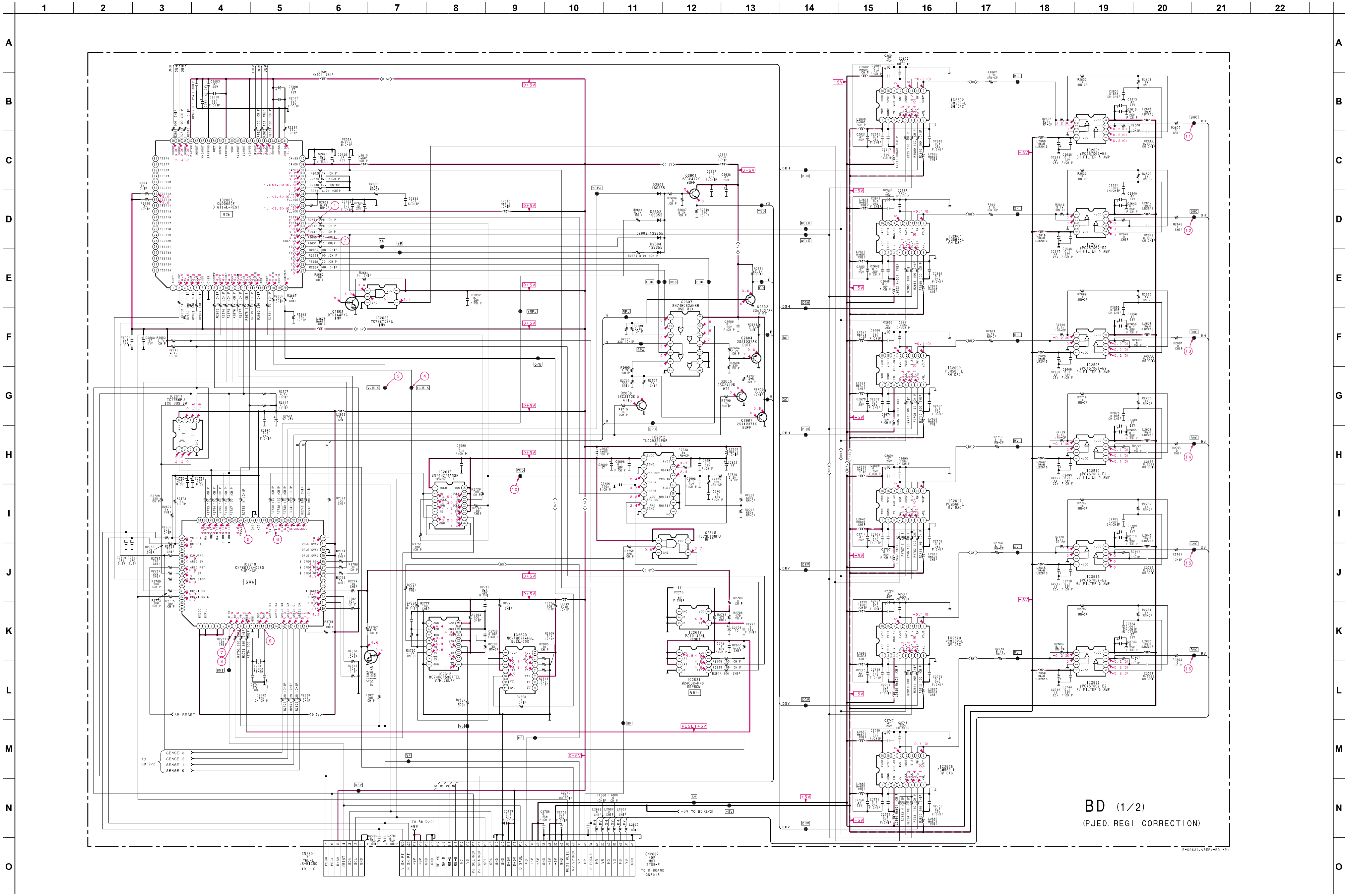
(14) Schematic Diagram of D Board


D
(H/V-DEF. HV. DY DRIVE)
(HV BLOCK)
TO PICTURE TUBE
TO HV BLOCK
(FOCUS PACK)
• D BOARD WAVEFORMS
① 1.5Vp-p (V)
② 1.7Vp-p (V)
③ 1.0Vp-p (V)
④ 56.0Vp-p (V)
⑤ 0.8Vp-p (V)
⑥ 12.5Vp-p (H)
⑦ 5.4Vp-p (H)
⑧ 221.5Vp-p (H)
⑨ 9.0Vp-p (H)
⑩ 1245Vp-p (H)
⑪ 22.8Vp-p (V)
⑫ 17.8Vp-p (V)
⑬ 38.3Vp-p (V)
⑭ 31.3Vp-p (V)
⑮ 22.3Vp-p (V)
⑯ 22.3Vp-p (V)

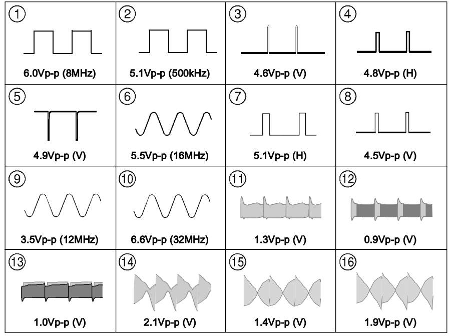
Schematic diagram
← D board

Schematic diagram
BD (1/2) board →

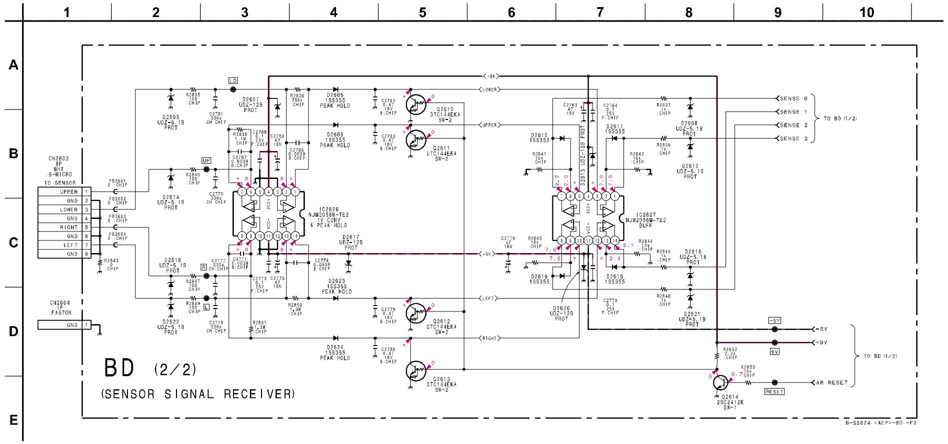
(15) Schematic Diagram of BD (1/2) Board


BD (1/2)
(PJED, REGI CORRECTION)
IC2605 CW0086CF DIGITAL-REGI
IC2619 CXP86324-228Q PJED-CPU
IC2617 TC7W06FU I2C BUS SW
IC2612 TLC2932IPWR PLL
IC2607 SN74HC32ANSR OSD MIX
IC2613 SN74HC74ANSR 16MHz PLL
IC2618 MC74HC4538AFEL V/H.DELAY
IC2620 MC74HC74AFEL EVEN/ODD
IC2621 M24C32-WMN6T EEPROM
IC2616 TC7WT08FU INV
IC2615 TC7ST08FU BUFF
IC2602 PCM56P-L BH DAC
IC2604 PCM56P-L GH DAC
IC2609 PCM56P-L RH DAC
IC2614 PCM56P-L BV DAC
IC2623 PCM56P-L GV DAC
IC2625 PCM56P-L RV DAC
IC2601 μPC4570G2-E2 BH FILTER & AMP
IC2606 μPC4570G2-E2 GH FILTER & AMP
IC2608 μPC4570G2-E2 RH FILTER & AMP
IC2610 μPC4570G2-E2 BV FILTER & AMP
IC2612 μPC4570G2-E2 GV FILTER & AMP
IC2622 μPC4570G2-E2 RV FILTER & AMP
CN2601 7P YEL S-MICRO TO JIG
CN2602 30P WHT BTOB-P TO D BOARD CN5015
SENSE 3
SENSE 2
SENSE 1
SENSE 0
TO BD (2/2)
-5V TO BD (2/2)
RESET+5V
AR RESET
D+5V
+5V
-5V
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O

• BD (1/2) BOARD WAVEFORMS



(16) Schematic Diagram of BD (2/2) Board


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
CN2603
8P
WHT
:S-MICRO
TO SENSOR
UPPER 1
GND 2
LOWER 3
GND 4
RIGHT 5
GND 6
LEFT 7
GND 8
CN2604
1P
:FASTON
GND 1
R2843 0 :CHIP
FB2601 0 :CHIP
FB2602 0 :CHIP
FB2603 0 :CHIP
FB2604 0 :CHIP
D2605 UDZ-5.1B PROT
D2614 UDZ-5.1B PROT
D2618 UDZ-5.1B PROT
D2622 UDZ-5.1B PROT
R2835 100 :CHIP
R2840 100 :CHIP
R2847 100 :CHIP
R2849 100 :CHIP
C2761 330p CH CHIP
C2770 330p CH CHIP
C2777 330p CH:CHIP
C2778 330p CH CHIP
LD
UP
R
L
D2607 UDZ-12B PROT
R2838 1.1M CHIP
C2767 0.0039 B:CHIP
C2768 0.1 25V F:CHIP
C2769 47 16V
C2766 0.0039 B:CHIP
C2771 0.0039 B:CHIP
C2772 0.1 25V F:CHIP
C2775 47 16V
C2774 0.0039 B:CHIP
R2836 750k :CHIP
R2850 1.3M :CHIP
R2851 1.3M :CHIP
IC2626
NJM2058M-TE2
1V CONV
& PEAK HOLD
VCC+
VCC-
D2617 UDZ-12B PROT
D2606 1SS355 PEAK HOLD
D2609 1SS355 PEAK HOLD
D2623 1SS355 PEAK HOLD
D2624 1SS355 PEAK HOLD
C2782 0.47 16V B:CHIP
C2765 0.47 16V B:CHIP
C2779 0.47 16V B:CHIP
C2780 0.47 16V B:CHIP
Q2610 DTC144EKA SW-2
Q2611 DTC144EKA SW-2
Q2612 DTC144EKA SW-2
Q2613 DTC144EKA SW-2
+9V
LOWER
UPPER
-5V
LEFT
RIGHT
C2776 47 16V
C2763 47 16V
C2764 0.1 25V F:CHIP
D2613 UDZ-12B PROT
D2610 1SS355
D2611 1SS355
R2841 10k :CHIP
R2842 10k :CHIP
IC2627
NJM2058M-TE2
BUFF
R2845 10k :CHIP
R2844 10k :CHIP
D2619 1SS355
D2615 1SS355
D2620 UDZ-12B PROT
C2773 0.1 25V F:CHIP
2.7
2.0
7.0
7.6
3.1
2.4
R2837 1k :CHIP
R2839 1k :CHIP
R2846 1k :CHIP
R2848 1k :CHIP
D2608 UDZ-5.1B PROT
D2612 UDZ-5.1B PROT
D2616 UDZ-5.1B PROT
D2621 UDZ-5.1B PROT
SENSE 0
SENSE 1
SENSE 2
SENSE 3
TO BD (1/2)
-5V
9V
+9V
R2852 2.2k :CHIP
R2853 10k :CHIP
0.7
Q2614 2SC2412K SW-1
RESET
AR RESET
TO BD (1/2)
BD (2/2)
(SENSOR SIGNAL RECEIVER)
B-SS624.<AEP>-BD.-P2

BD [PJED, REGI CORRECTION]

• BD BOARD SEMICONDUCTOR LOCATION

IC

	(Component Side)	(Conductor Side)
IC2601	B-1	
IC2602	A-1	B-1
IC2603	B-1	
IC2604	A-2	B-2
IC2605	A-4	
IC2606	A-3	
IC2607	B-3	
IC2608	B-1	
IC2609	A-2	B-2
IC2610	B-2	
IC2611	B-3	
IC2612	A-3	
IC2613	A-3	
IC2614	A-1	B-1
IC2615	A-3	
IC2616	B-1	
IC2617	B-4	
IC2618	B-3	
IC2619	B-3	
IC2620	B-4	
IC2621	A-4	
IC2622	B-1	
IC2623	A-1	B-2
IC2625	A-1	B-2
IC2626	B-1	
IC2627	B-1	

TRANSISTOR

	(Component Side)	(Conductor Side)	*
Q2601	A-3		②
Q2602	B-4		②
Q2603	A-4		②
Q2604	B-4		②
Q2605	B-4		②
Q2606	B-3		②
Q2607		A-4	①
Q2608		A-3	①
Q2610		B-1	①
Q2611	B-1		②
Q2612		B-1	①
Q2613	B-1		②
Q2614	B-1		②

DIODE

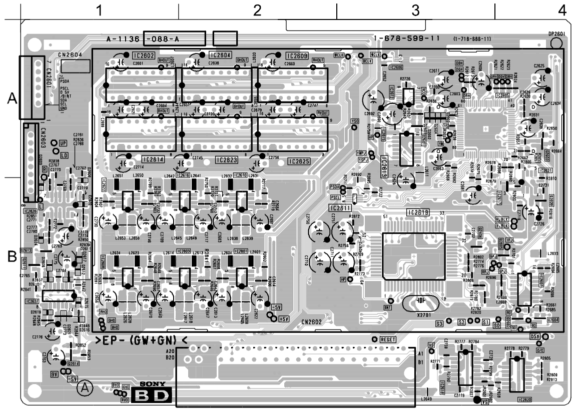
	(Component Side)	(Conductor Side)	*
D2601	A-3		③
D2602	A-3		③
D2603	A-3		③
D2604	A-3		③
D2605		B-1	③
D2606	B-1		③
D2607		B-1	③
D2608	B-1		③
D2609	B-1		③
D2610	B-1		③
D2611	B-1		③
D2612	B-1		③
D2613		A-1	③
D2614		B-1	③
D2615	B-1		③
D2616	B-1		③
D2617	B-1		③
D2618		B-1	③
D2619	B-1		③
D2620		A-1	③
D2621	B-1		③
D2622		B-1	③
D2623	B-1		③
D2624	B-1		③

CRYSTAL

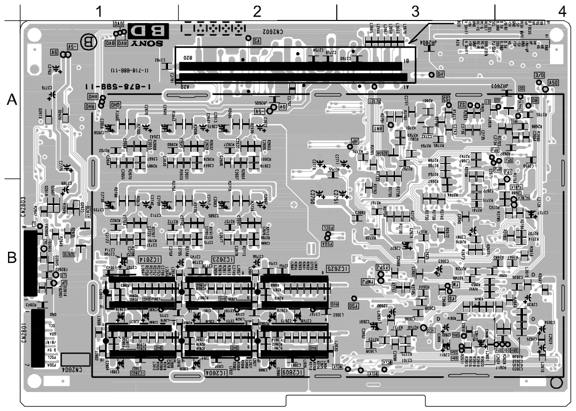
	(Component Side)	(Conductor Side)
X2701	B-3	

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

– BD BOARD – (Component Side)


1
2
3
4
A
B
A-1136-088-A
1-878-599-11
(1-718-888-11)
CN2604
IC2602
IC2604
IC2609
IC2614
IC2623
IC2625
IC2611
IC2701
X2701
CN2602
>EP-(GW+GN)<
RESET
SONY
BD
A

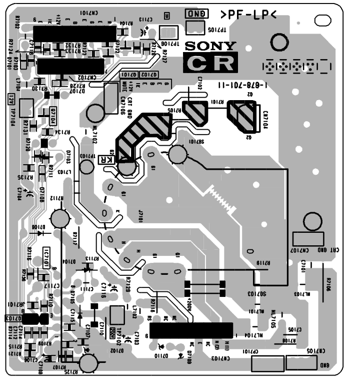
(Conductor Side)


1
2
3
4
A
B
BD
SONY
1-878-599-11
CN2602
CN2603
CN2601
CN2604
IC2614
IC2623
IC2625
IC2602
IC2604
IC2609

Schematic diagram
← BD (1/2) board

CR [R CRT DRIVE] ZR [DY, VM DRIVE]

– CR BOARD –

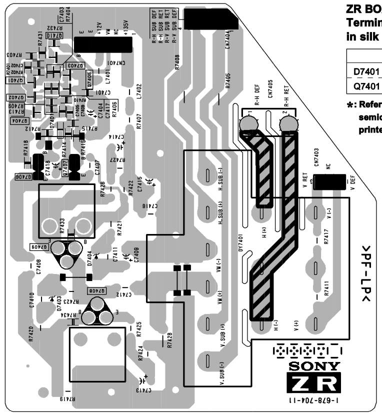


CR BOARD
Terminal name of semiconductors in silk screen printed circuit (*)

Ref.	*
D7108	③
Q7101, 7104	①

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

– ZR BOARD –



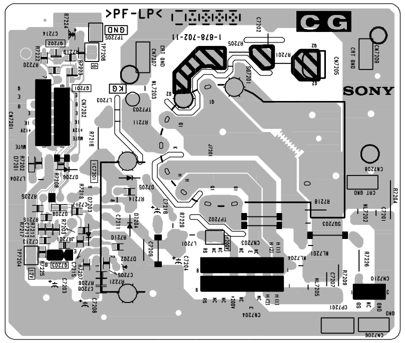
ZR BOARD
Terminal name of semiconductors in silk screen printed circuit (*)

Ref.	*
D7401	③
Q7401 – 7405, 7410	①

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

CG [G CRT DRIVE] ZG [DY, VM DRIVE]

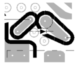
– CG BOARD –



CG BOARD
Terminal name of semiconductors in silk screen printed circuit (*)

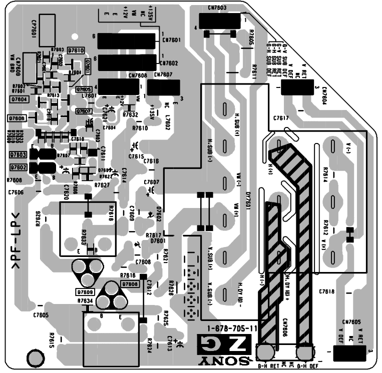
Ref.	*
D7208	③
Q7201, 7202	①

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)



NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

– ZG BOARD –



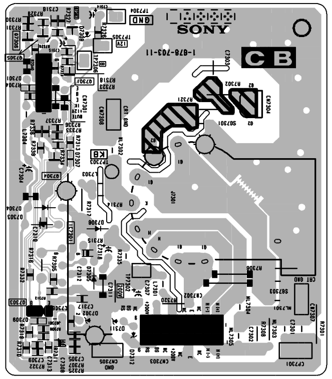
ZG BOARD
Terminal name of semiconductors in silk screen printed circuit (*)

Ref.	*
D7603	③
Q7601, 7604 – 7607, Q7610	①

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

CB [B CRT DRIVE] ZB [DY, VM DRIVE]

– CB BOARD –

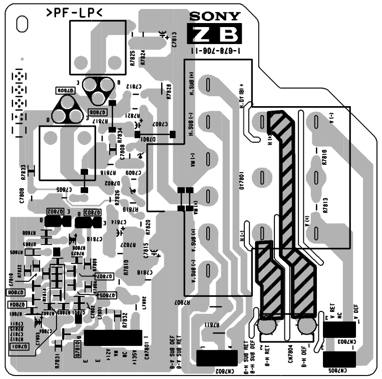


CB BOARD
Terminal name of semiconductors in silk screen printed circuit (*)

Ref.	*
D7307, 7309	③
Q7301, 7302, 7305, 7306	①

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

– ZB BOARD –

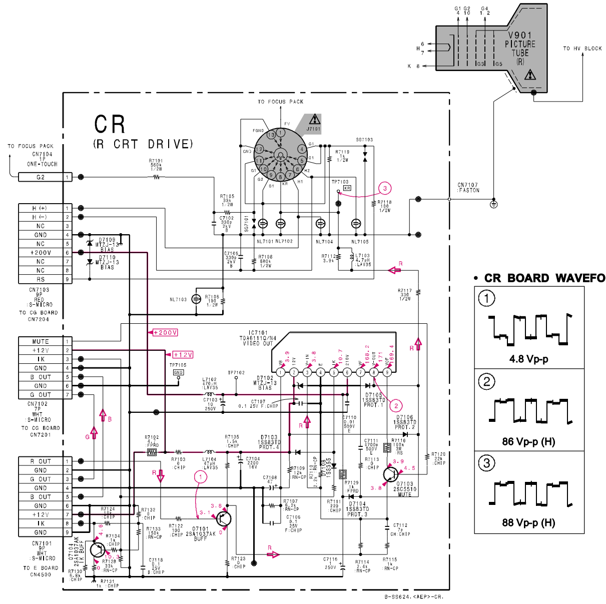


ZB BOARD
Terminal name of semiconductors in silk screen printed circuit (*)

Ref.	*
D7803	③
Q7801, 7804 – 7807, Q7810	①

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

(17) Schematic Diagrams of CR, CG, CB, ZR, ZG and ZB Boards

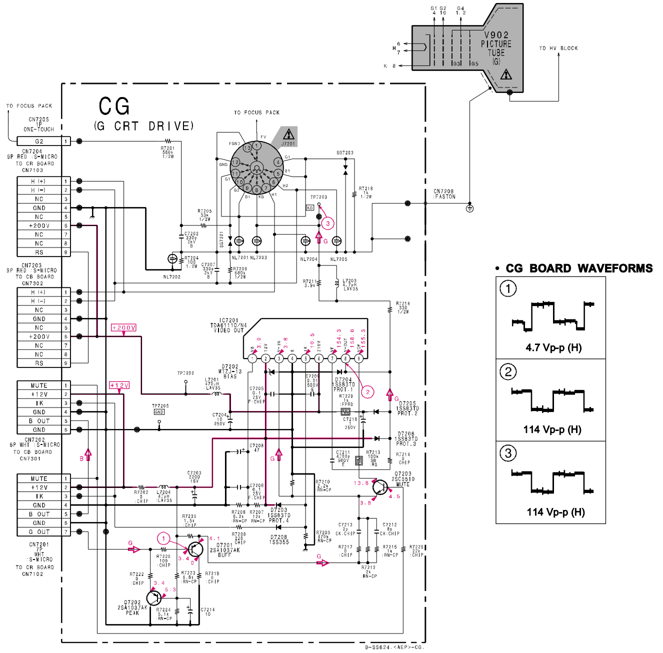

V901 PICTURE TUBE (R)
TO HV BLOCK
CR
(R CRT DRIVE)
TO FOCUS PACK
IC7101 TDA6111Q/N4 VIDEO OUT
+200V
+12V
CN7104 1P ONE-TOUCH
CN7199 9P S-MICRO TO CG BOARD CN7204
CN7202 7P WHT S-MICRO TO CG BOARD CN7201
CN7101 9P WHT S-MICRO TO E BOARD CN4500
CN7107 FASTON
B-SS624.<AEP>-CR.

• CR BOARD WAVEFORMS

① 4.8 Vp-p (H)

② 86 Vp-p (H)

③ 88 Vp-p (H)

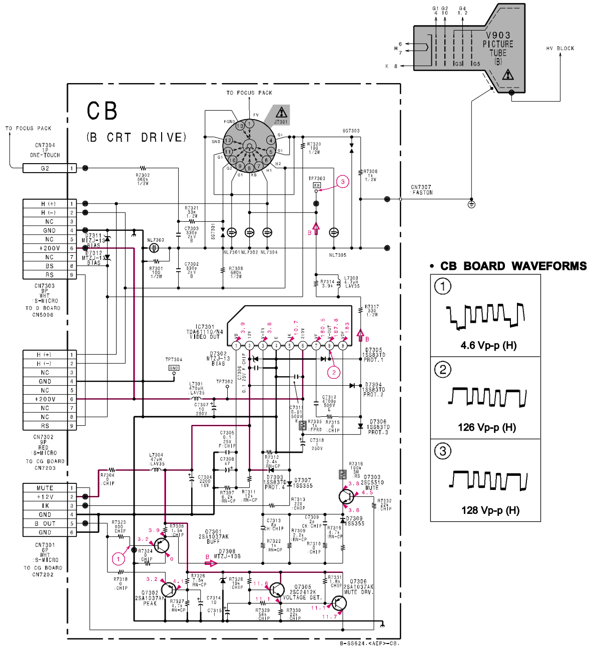

V902 PICTURE TUBE (G)
TO HV BLOCK
CG
(G CRT DRIVE)
TO FOCUS PACK
IC7201 TDA6111Q/N4 VIDEO OUT
+200V
+12V
CN7205 1P ONE-TOUCH
CN7204 9P RED S-MICRO TO CR BOARD CN7103
CN7203 9P RED S-MICRO TO CB BOARD CN7302
CN7202 6P WHT S-MICRO TO CB BOARD CN7301
CN7201 7P WHT S-MICRO TO CR BOARD CN7102
CN7208 FASTON
B-SS624.<AEP>-CG.

• CG BOARD WAVEFORMS

① 4.7 Vp-p (H)

② 114 Vp-p (H)

③ 114 Vp-p (H)

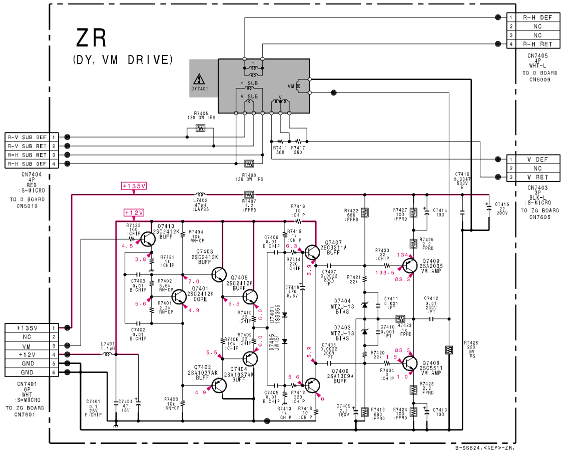

V903 PICTURE TUBE (B)
HV BLOCK
CB
(B CRT DRIVE)
TO FOCUS PACK
IC7301 TDA6111Q/N4 VIDEO OUT
+200V
+12V
CN7304 1P ONE-TOUCH
CN7303 8P WHT S-MICRO TO D BOARD CN5006
CN7302 9P RED S-MICRO TO CG BOARD CN7203
CN7301 6P WHT S-MICRO TO CG BOARD CN7202
CN7307 FASTON
B-SS624.<AEP>-CB.

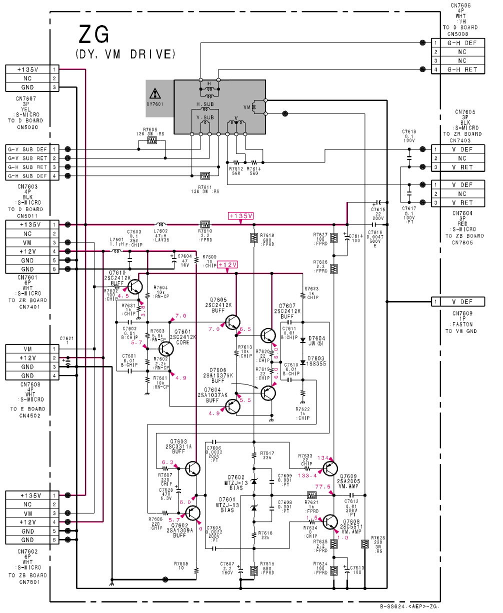
• CB BOARD WAVEFORMS

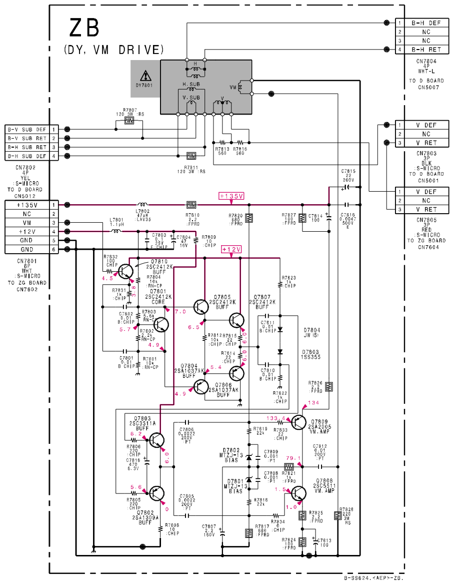
① 4.6 Vp-p (H)

② 126 Vp-p (H)

③ 128 Vp-p (H)


ZR
(DY, VM DRIVE)
DY7401
H.SUB
V.SUB
VM
+135V
+12V
R-H DEF
R-H RET
V DEF
V RET
CN7405 4P WHT-L TO D BOARD CN5009
CN7404 4P RED S-MICRO TO D BOARD CN5010
CN7403 3P BLK S-MICRO TO ZG BOARD CN7603
CN7401 6P WHT S-MICRO TO ZG BOARD CN7601
B-SS624.<AEP>-ZR.


ZG
(DY, VM DRIVE)
DY7601
H.SUB
V.SUB
VM
+135V
+12V
G-H DEF
G-H RET
V DEF
V RET
CN7606 4P WHT TO D BOARD CN5008
CN7607 3P YEL S-MICRO TO D BOARD CN5020
CN7605 3P BLK S-MICRO TO ZR BOARD CN7403
CN7604 3P RED S-MICRO TO ZB BOARD CN7605
CN7609 1P FASTON TO VM GND
CN7603 6P WHT S-MICRO TO ZR BOARD CN7401
CN7608 6P WHT S-MICRO TO E BOARD CN4802
CN7602 6P WHT S-MICRO TO ZB BOARD CN7801
B-SS624.<AEP>-ZG.


ZB
(DY, VM DRIVE)
DY7801
H.SUB
V.SUB
VM
+135V
+12V
B-H DEF
B-H RET
V DEF
V RET
CN7804 4P WHT-L TO D BOARD CN5007
CN7809 4P YEL S-MICRO TO D BOARD CN5012
CN7803 3P BLK S-MICRO TO D BOARD CN5001
CN7805 3P RED S-MICRO TO ZG BOARD CN7604
CN7801 6P WHT S-MICRO TO ZG BOARD CN7602
B-SS624.<AEP>-ZB.

Schematic diagrams

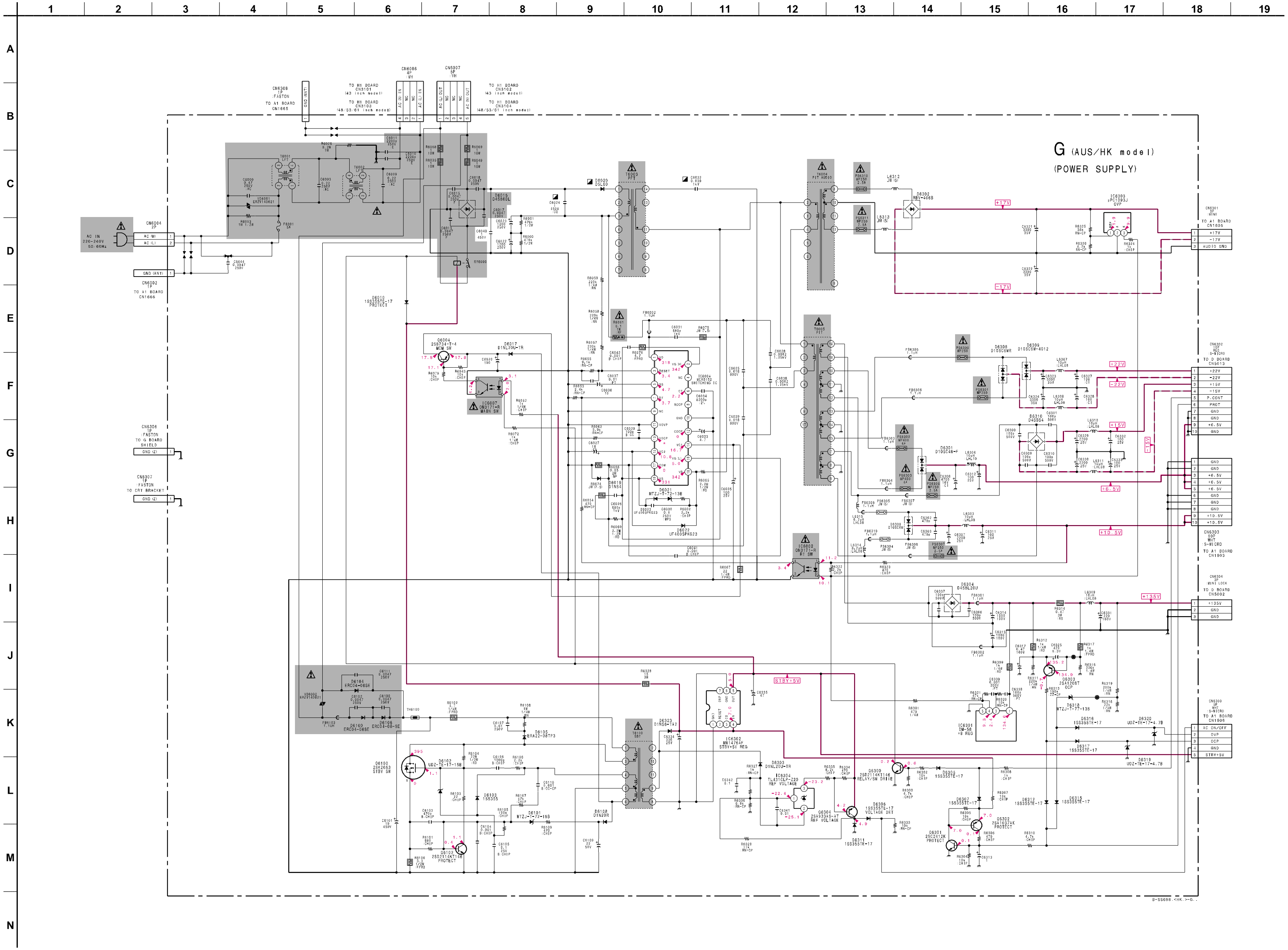
CB CG CR

← ZB ZG ZR boards

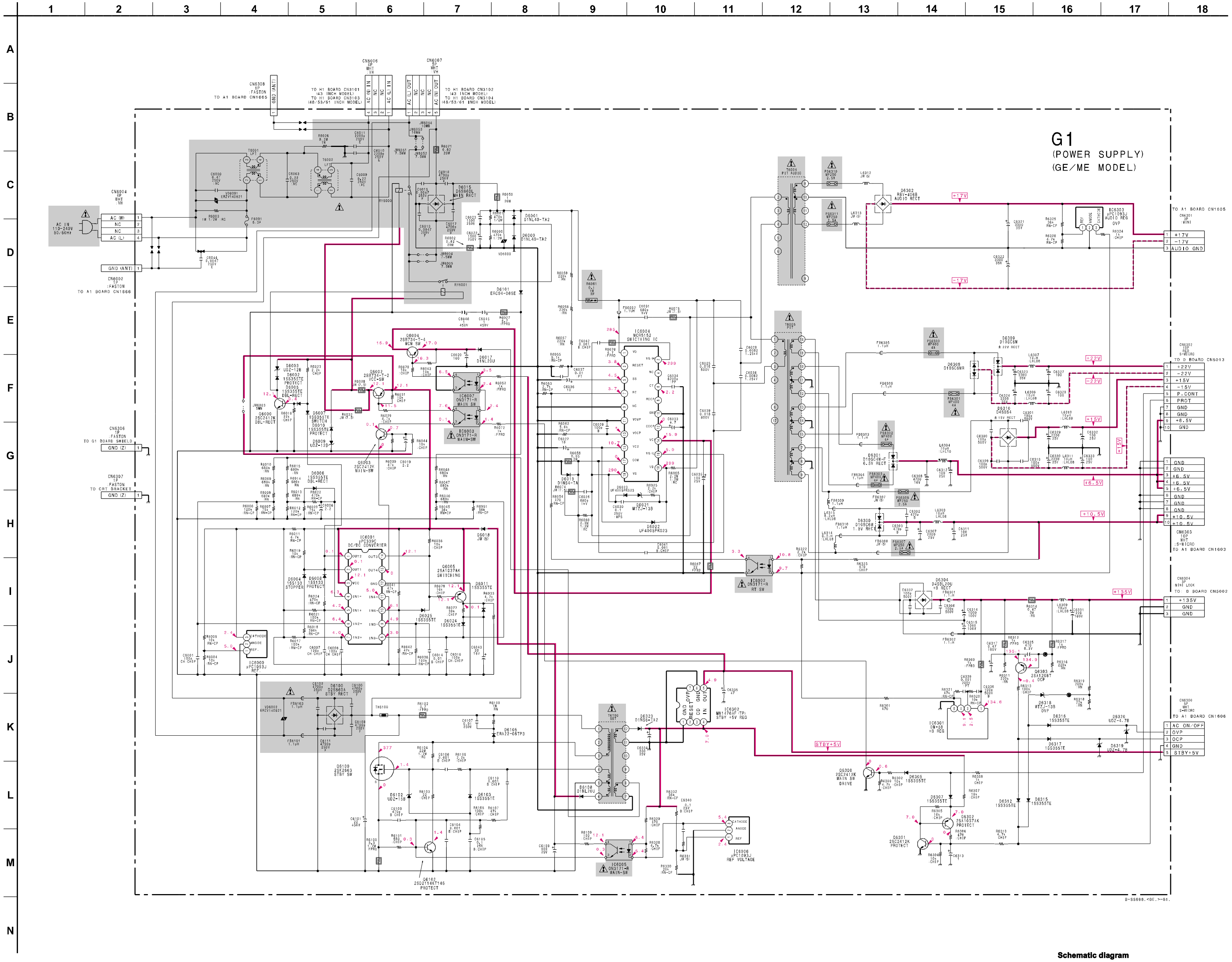
Schematic diagram

G board →

(18) Schematic Diagram of G Board (AUS/HK)


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
A
B
C
D
E
F
G
H
I
J
K
L
M
N
G (AUS/HK model)
(POWER SUPPLY)
AC IN
220-240V
50/60Hz
CN6004
2P
AC (W)
AC (L)
GND (ANT)
CN6002
1P
TO A1 BOARD
CN1666
CN6308
1P
:FASTON
TO A1 BOARD
CN1665
GND (ANT)
TO H1 BOARD
CN3101
(43 inch model)
TO H1 BOARD
CN3103
(48/53/61 inch model)
CN6006
4P
:VH
AC (N) IN
NC
NC
AC (L) IN
CN6007
5P
:VH
AC (L) OUT
NC
NC
NC
AC (N) OUT
TO H1 BOARD
CN3102
(43 inch model)
TO H1 BOARD
CN3104
(48/53/61 inch model)
T6001
LFT
T6002
LFT
C6000
0.47
250V
:AC
VD6001
ERZV140621
R6003
1M 1/2W
F6001
5A
C6003
0.22
250V
:AC
C6009
0.22
250V
:AC
R6026
8.2M
1W
C6011
2200p
250V
:E
C6010
2200p
250V
:E
R6068
1
10W
R6035
1
10W
R6069
1
10W
R6049
1
10W
C6018
0.0047
250V
C6015
0.0047
250V
F
C6013
0.0047
250V
F
C6017
0.0047
250V
D6015
D4SB60L
C6024
1
450V
:CQ
C6040
1
450V
C6023
1200
250V
C6022
1200
250V
R6001
470k
1/2W
R6000
470k
1/2W
C6044
0.0047
250V
RY6000
D6010
1SS355TE-17
PROTECT
Q6004
2SB734-T-4
MCM SW
D6017
D1NL20U-TR
17.8
17.8
IC6303
μPC1093J
OVP
REF
A
K
1.9
9.9
C6321
3300
35V
C6322
3300
35V
R6325
36k
RN-CP
R6326
4.7k
RN-CP
R6324
1k
:CHIP
CN6301
3P
:MINI
TO A1 BOARD
CN1605
+17V
-17V
AUDIO GND
CN6302
10P
RED
:S-MICRO
TO D BOARD
CN5013
+22V
-22V
+15V
-15V
P.CONT
PROT
GND
GND
+6.5V
GND
GND
GND
+6.5V
+6.5V
+6.5V
GND
GND
GND
+10.5V
+10.5V
CN6303
10P
WHT
:S-MICRO
TO A1 BOARD
CN1603
CN6304
3P
:MINI LOCK
TO D BOARD
CN5002
+135V
GND
GND
CN6300
5P
WHT
:S-MICRO
TO A1 BOARD
CN1606
AC ON/OFF
OVP
OCP
GND
STBY+5V
+17V
-17V
+22V
-22V
+15V
-15V
+6.5V
+10.5V
+135V
STBY+5V

(19) Schematic Diagram of G1 Board (GE/ME)


G1
(POWER SUPPLY)
(GE/ME MODEL)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
A
B
C
D
E
F
G
H
I
J
K
L
M
N
AC IN 110-240V 50/60Hz
CN6308
TO A1 BOARD CN6665
CN6606
TO H1 BOARD CN3101
CN6607
TO H1 BOARD CN3102
CN6604
CN6602
TO A1 BOARD CN1666
CN6306
TO G1 BOARD SHIELD
CN6307
TO CRT BRACKET
IC6604
MCR5152
SWITCHING IC
IC6601
DC/DC CONVERTER
IC6302
STBY +5V REG
IC6303
AUDIO REG
TO A1 BOARD CN1605
TO D BOARD CN5013
TO A1 BOARD CN1603
TO D BOARD CN5002
TO A1 BOARD CN1606
+17V
-17V
AUDIO GND
+22V
-22V
+15V
-15V
P.CONT
PROT
GND
+6.5V
+10.5V
+135V
AC ON/OFF
OVP
OCP
STBY+5V

Schematic diagram
G1 board

G ［POWER SUPPLY］(AUS/HK) **G1** ［POWER SUPPLY］(GE/ME)

• G BOARD SEMICONDUCTOR LOCATION

IC		
IC6002	B-3	
IC6004	A-4	
IC6007	C-3	
IC6301	A-2	
IC6302	D-3	
IC6303	A-1	
IC6304	D-2	

TRANSISTOR		*
Q6004	C-4	–
Q6100	D-4	–
Q6102	C-4	①
Q6300	D-2	①
Q6301	D-1	①
Q6302	D-1	①
Q6303	A-1	–
Q6304	D-2	–

DIODE		*
D6010	D-3	③
D6015	C-4	–
D6017	D-4	–
D6019	A-5	–
D6020	B-5	–
D6021	A-5	–
D6022	A-5	–
D6023	A-5	–
D6100	E-1	–
D6101	D-4	–
D6102	D-4	③
D6103	D-4	–
D6104	E-4	–
D6105	D-4	–
D6106	E-4	–
D6108	D-4	–
D6300	C-2	–
D6301	C-2	–
D6302	A-2	–
D6303	D-2	–
D6304	B-2	–
D6305	D-2	③
D6306	D-2	③
D6307	D-1	③
D6308	C-2	–
D6309	C-2	–
D6310	C-3	–
D6311	D-2	③
D6312	D-1	③
D6315	D-1	③
D6316	D-1	③
D6317	D-1	③
D6318	A-1	–
D6319	D-1	③
D6320	D-1	③
D6323	D-3	–

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

• G1 BOARD SEMICONDUCTOR LOCATION

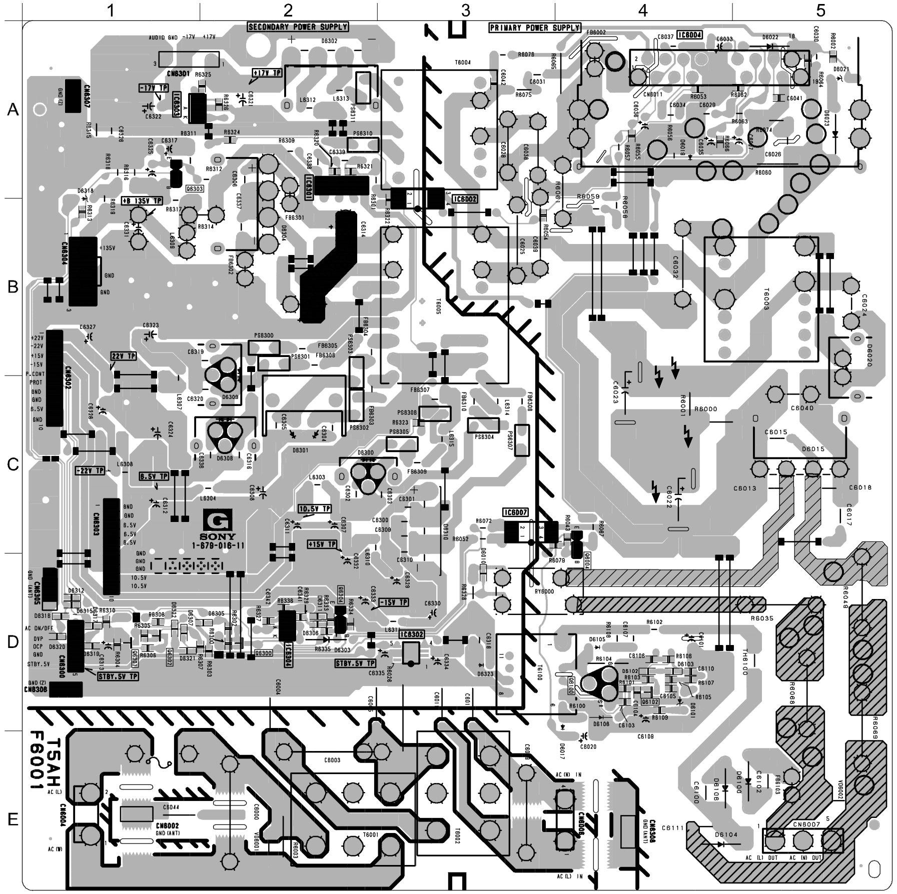
IC		
IC6000	D-4	
IC6001	D-4	
IC6002	B-3	
IC6003	C-3	
IC6004	A-4	
IC6005	D-3	
IC6006	D-2	
IC6007	C-3	
IC6301	A-2	
IC6302	D-2	
IC6303	A-1	

TRANSISTOR		*
Q6000	D-4	①
Q6002	D-4	–
Q6003	D-4	①
Q6004	D-3	–
Q6005	D-5	–
Q6100	D-3	–
Q6102	E-3	①
Q6300	D-2	①
Q6301	D-1	①
Q6302	D-1	①
Q6303	A-1	–

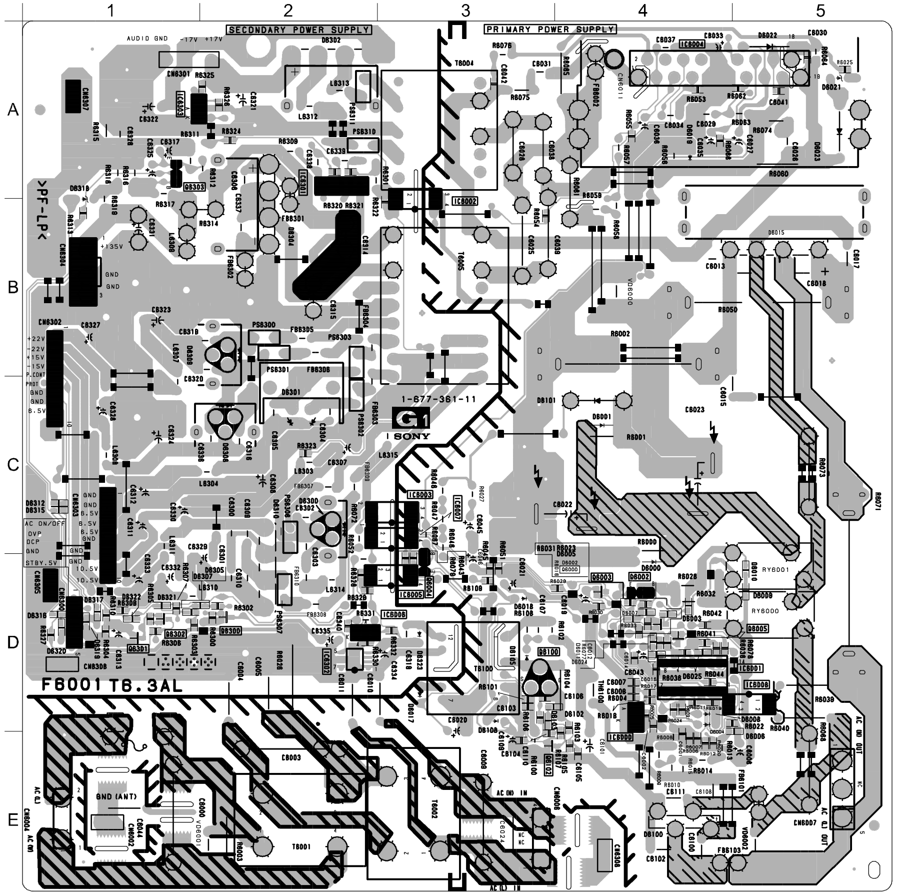
DIODE		*
D6000	D-4	–
D6001	C-4	–
D6002	D-4	③
D6003	D-4	③
D6004	D-4	–
D6005	D-4	③
D6006	D-5	③
D6007	D-4	③
D6008	D-4	–
D6009	D-5	③
D6010	D-5	③
D6011	D-4	③
D6015	B-5	–
D6017	D-3	–
D6019	A-4	–
D6021	A-5	–
D6022	A-5	–
D6023	A-5	–
D6024	D-4	③
D6025	D-4	③
D6100	E-4	–
D6101	C-4	–
D6102	D-4	③
D6103	D-3	③
D6105	D-3	–
D6108	D-3	–
D6300	C-2	–
D6301	C-2	–
D6302	A-2	–
D6304	B-2	–
D6305	D-2	③
D6307	D-1	③
D6308	C-1	–
D6309	B-2	–
D6310	C-2	–
D6312	C-1	③
D6315	C-1	③
D6316	D-1	③
D6317	D-1	③
D6318	A-1	–
D6319	D-1	③
D6320	D-1	③
D6323	D-3	–

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 110)

– G BOARD – (AUS/HK)

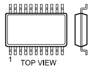

1
2
3
4
5
A
B
C
D
E
SECONDARY POWER SUPPLY
PRIMARY POWER SUPPLY
IC6004
IC6002
IC6007
IC6302
IC6303
IC6301
IC6304
T6004
T6003
G
SONY
1-878-018-11
T5AH
F6001
CN6301
CN6302
CN6303
CN6304
CN6305
CN6306
CN6307
CN6002
CN6004
CN6007
T6001
+17V TP
-17V TP
+B 135V TP
22V TP
-22V TP
8.5V TP
10.5V TP
+15V TP
-15V TP
STBY.5V TP
STBY.5V TP
GND (ANT)
AC (L) IN
AC (N) IN
AC (L) OUT
AC (N) OUT

– G1 BOARD – (GE/ME)


1
2
3
4
5
A
B
C
D
E
SECONDARY POWER SUPPLY
PRIMARY POWER SUPPLY
IC6004
IC6002
IC6003
IC6005
IC6006
IC6000
IC6001
IC6302
IC6303
IC6301
T6004
T6003
T6002
T6001
G1
SONY
1-877-361-11
F6001 T6.3AL
CN6301
CN6302
CN6303
CN6304
CN6305
CN6306
CN6002
CN6004
CN6007
RY6000
RY6001
GND (ANT)
AC (L) IN
AC (N) IN
AC (L) OUT
AC (N) OUT

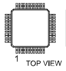
7-5. SEMICONDUCTORS

CA0007AM
LM339NS
MC74HC74AFEL
NJM2058M-TE2
SN74HC32ANS
SN74HC32ANSR
SN74HC74ANS
SN74HC74ANSR
TLC2932IPW
TLC2932IPW-E20
TLC2933IPWR
μPC339G2-T2



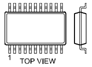
14pin SOP

CM0006CF



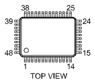
80pin QFP

CXA1875AM-T4
MC74HC4538AF
MC74HC4538AFEL
PCM56P
PCM56P-L

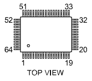


16pin SOP

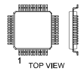
CXA2123BQ-T6


38
25
39
24
48
15
1
14
TOP VIEW

CXA2069Q
CXA2100AQ-TL
CXP750096-025Q-TL
CXP86324-028Q

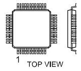

51
33
52
32
64
20
1
19
TOP VIEW

CXA3266Q-T6
CXD2064Q-T6
CXD2309Q-T6



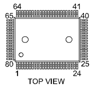
48pin QFP

CXD2090Q

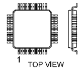


208pin QFP

CXD2303AQ
CXD2303AQ-TL

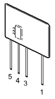

64
41
65
40
80
25
1
24
TOP VIEW

CXD9509Q

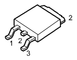


240pin QFP

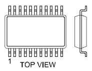
DM-58



LF50CDT-TR

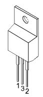


LM358D
LM358DR
M24C04-MN6T
M24C04-WMN6T
M24C08-MN6T(A)
M24C32-MN6T
TC7W02F
TC7W02F(TE12R)
TC7W04F
TC7W04F(TE12R)
TC7W08F
TC7W08F(TE12R)
TC7W32F
TC7W32F(TE12R)
TC7W66FU(TE12R)
TDA2822D013TR
μPC4570G2
μPC4570G2-E2

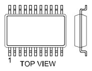


8pin SOP

LM7912CT

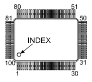


MB81F643242B-10FN

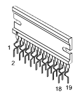


86pin SOP

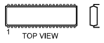
MB94918RPF-G124-BND


80
51
81
50
INDEX
100
31
1
30

MCR5152

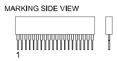


MC74HC4053AFEL



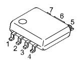
16pin DIP

MM1115XFBE

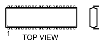

MARKING SIDE VIEW
1

8pin SIP

MM1476AF(TP)

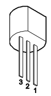


NJM2058D
μPC339C

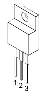


14pin DIP

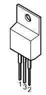
NJM78L05A
TA78L005AP-TPE6



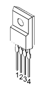
NJM7812FA
NJM78M05FA
NJM78M09FA
NJM79M12FA
PQ09RF2



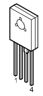
NJM79M05FA



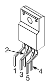
PQ05RF11



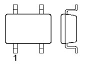
PQ30RV21



PQ5EV3

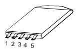


PST9120NL
PST9145NL
TC7SET04F(TE85R)
TC7SET08FU(TE85)
TC7SET08FU(TE85R)

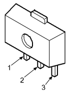


5pin CHIP

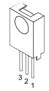
PST9143NL



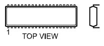
S-80743AL-A7-S
S-80743AL-A7-T1



SBX3081-01

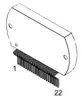


SDA5254-2B006

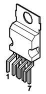


52pin DIP

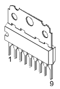
STK392-020



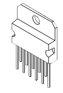
STV9379



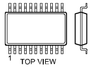
TDA6111Q/N4



TDA7265

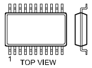


TDA7315D013TR



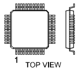
20pin SOP

TDA9178T/N1.118



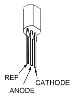
24pin SOP

TLC5733AIPM

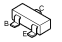


64pin QFP

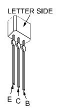
TL431CLP
TL431CLP-Z20
μPC1093J-1-T


REF
ANODE
CATHODE

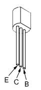
DTC144EKA
DTC144EKA-T146
2SA1037AK-T146-QR
2SA1037AK-T146-R
2SA1037K-T-146-R
2SA1162-G
2SB709A-QRS-TX
2SC1623-L5L6
2SC2412K-T-146-QR
2SC2412K-T-146-R
2SC2412K-T-146-S
2SD2114K
2SD2114KT146
2SD601A-Q
2SD601A-QRS-TX



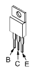
2SA1175-HFE
2SA1309A-QRSTA
2SA933AS-QT
2SA933AS-RT
2SC3311A-QRSTA


LETTER SIDE
E
C
B

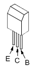
2SA1208
2SA1208-T
2SC2551-O
2SC2551O-TPE2



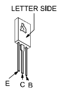
2SA2005
2SC5022-02
2SC5511



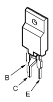
2SB733-34
2SB734-34
2SB734-T-2
2SB734-T-4



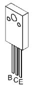
2SC2688-LK


LETTER SIDE
E
C
B

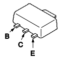
2SC4632LS-CB7



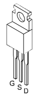
2SC5047-YB



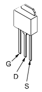
2SK2036(TE85L)



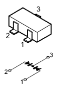
2SK2251-01-F19



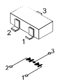
2SK2663



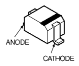
DAN202K
DAN202K-T-146



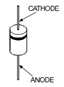
DA204K
DA204K-T-146



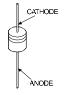
DTZ-TT11-15B
DTZ24B
DTZ4.7C
DTZ5.1B
DTZ9.1
MA111-(K8).SO
MA111-TX
MA113-(TX)
RD12SB2
UDZ-TE-17-12B
UDZ-TE-17-15B
UDZ-TE-17-2.4B
UDZ-TE-17-24B
UDZ-TE-17-3.9B
UDZ-TE-17-4.7B
UDZ-TE-17-5.1B
UDZ-TE-17-6.2B
UDZ-TE-17-6.8B
UDZ-TE-17-8.2B
UDZ-TE-17-9.1B
1SS355TE-17


ANODE
CATHODE

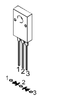
D1NL20U-TR
D1NS6
D1NS6-TA2
EGP20G
EL1Z
EL1Z-V1
ERA22-08
ERA22-08TP3
GP08D
GP08DL-6563
GP08DPKG23
RGP02-20EL-6394
RGP10GPKG23
RGP15GPKG23
UF4005PKG23
1SS83
1SS83TD


CATHODE
ANODE

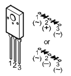
D1N20R
D1N20R-TA2
D1NL40-TA2
D1NS4
MTZJ-13
MTZJ-13B
MTZJ-7.5B
MTZJ-T-72-13B
MTZJ-T-77-10B
MTZJ-T-77-13
MTZJ-T-77-13B
MTZJ-T-77-15
MTZJ-T-77-2.2A
MTZJ-T-77-24
MTZJ-T-77-36B
MTZJ-T-77-5.1B
MTZJ-T-77-7.5B
RD10ESB2
RD13ES-B2
RD5.1ESB2
1SS133T-77


CATHODE
ANODE

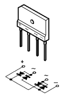
D10SC4M
D10SC4M-F
D10SC6M-4012



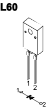
D10SC6MR


1
(~)
2
(+)
3
(~)
or
1
(~)
2
(–)
3
(~)
1
2
3

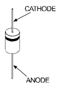
D2SB60A-F04
D4SB60L
D4SBL20U
D4SBS4
D4SBS4-F
D6SB60L
RBA-406B
RBV-406B



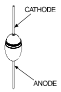
D5L60



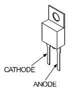
ERC04-06SE
MTZJ-T-72-18B


CATHODE
ANODE

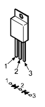
ERC38-06


CATHODE
ANODE

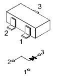
ERD08M-15


CATHODE
ANODE

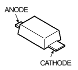
FMG-36S-LF024-104



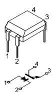
MA3062M-TX
MA3220M-TX



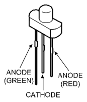
MA8039


ANODE
CATHODE

ON3171-R

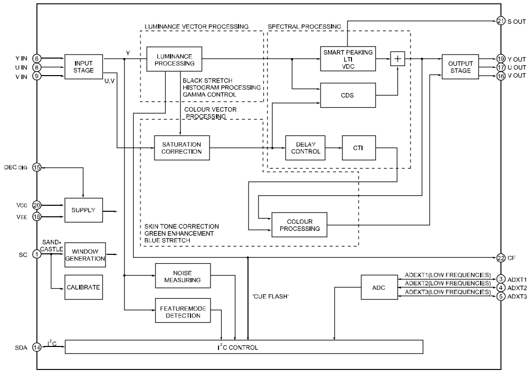


SPR-325MVW

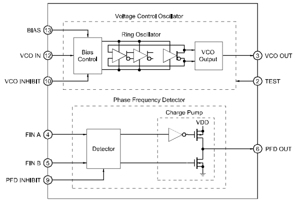

ANODE
(GREEN)
CATHODE
ANODE
(RED)

7-6. IC BLOCK DIAGRAMS

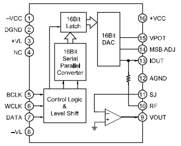
- **J1 (2/2) BOARD IC8601**
  TDA9178T


Y IN
U IN
V IN
INPUT STAGE
LUMINANCE VECTOR PROCESSING
LUMINANCE PROCESSING
BLACK STRETCH
HISTOGRAM PROCESSING
GAMMA CONTROL
SPECTRAL PROCESSING
SMART PEAKING LTI VDC
CDS
COLOUR VECTOR PROCESSING
SATURATION CORRECTION
DELAY CONTROL
CTI
OUTPUT STAGE
S OUT
Y OUT
U OUT
V OUT
DEC DIG
VCC
VEE
SUPPLY
SAND-CASTLE
SC
WINDOW GENERATION
CALIBRATE
COLOUR PROCESSING
SKIN TONE CORRECTION
GREEN ENHANCEMENT
BLUE STRETCH
CF
NOISE MEASURING
FEATUREMODE DETECTION
'CUE FLASH'
ADC
ADEXT1(LOW FREQUENCIES)
ADEXT2(LOW FREQUENCIES)
ADEXT3(LOW FREQUENCIES)
ADXT1
ADXT2
ADXT3
SDA
I²C CONTROL

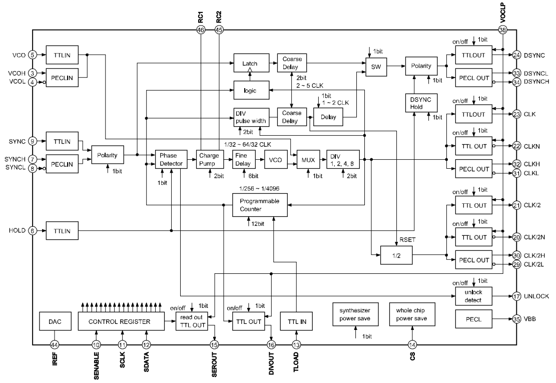
- **B3 (1/5) BOARD IC504**
  TLC2933IPWR


Voltage Control Oscillator
BIAS
VCO IN
VCO INHIBIT
Bias Control
Ring Oscillator
VCO Output
VCO OUT
TEST
Phase Frequency Detector
Charge Pump
FIN A
FIN B
PFD INHIBIT
Detector
VDD
PFD OUT

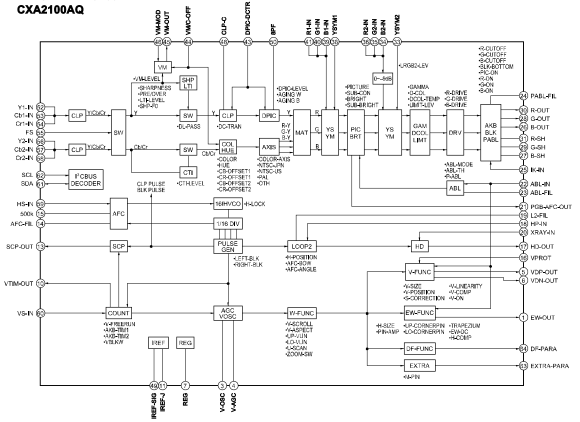
- **BD (1/2) BOARD IC2602, 2604, 2609, 2614, 2623, 2625**
  PCM56P


–VCC
DGND
+VL
NC
16Bit Latch
16Bit Serial Parallel Converter
16Bit DAC
+VCC
VPOT
MSB ADJ
IOUT
AGND
BCLK
WCLK
DATA
–VL
Control Logic & Level Shift
SJ
RF
VOUT

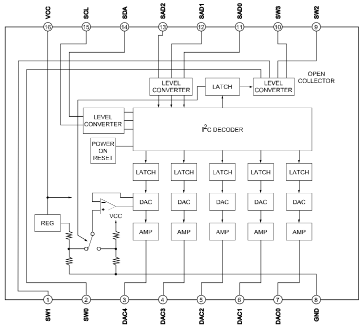
- **B3 (5/5) BOARD IC303**
  CXA3266Q


RC1
RC2
VCCLP
VCO
VCOH
VCOL
TTLIN
PECLIN
Latch
Coarse Delay
2 ~ 5 CLK
logic
DIV pulse width
Coarse Delay
Delay
1 ~ 2 CLK
SW
Polarity
DSYNC Hold
TTLOUT
PECL OUT
TTL OUT
DSYNC
DSYNCL
DSYNCH
CLK
CLKN
CLKH
CLKL
CLK/2
CLK/2N
CLK/2H
CLK/2L
SYNC
SYNCH
SYNCL
Polarity
Phase Detector
Charge Pump
Fine Delay
VCO
MUX
DIV 1, 2, 4, 8
1/32 ~ 64/32 CLK
1/256 ~ 1/4096
Programmable Counter
12bit
RSET
1/2
HOLD
unlock detect
UNLOCK
PECL
VBB
DAC
CONTROL REGISTER
read out TTL OUT
TTL OUT
TTL IN
synthesizer power save
whole chip power save
IREF
SENABLE
SCLK
SDATA
SEROUT
DIVOUT
TLOAD
CS

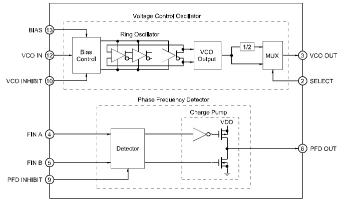
- **E BOARD IC4301**
  CXA2100AQ


VM-MOD
VM-OUT
VMC-OFF
CLP-C
DPIC-DCTR
BPF
R1-IN
G1-IN
B1-IN
YSYM1
R2-IN
G2-IN
B2-IN
YSYM2
Y1-IN
Cb1-IN
Cr1-IN
FS
Y2-IN
Cb2-IN
Cr2-IN
CLP
SW
VM
SHP LTI
CLP
DPIC
COL HUE
AXIS
MAT
YS YM
PIC BRT
GAM DCOL LIMIT
DRV
AKB BLK PABL
CTI
SCL
SDA
I²CBUS DECODER
PABL-FIL
R-OUT
G-OUT
B-OUT
R-SH
G-SH
B-SH
IK-IN
ABL-IN
ABL-FIL
ABL
HS-IN
500k
AFC-FIL
AFC
16fH/VCO
1/16 DIV
PULSE GEN
LOOP2
HD
PGB-AFC-OUT
L2-FIL
HP-IN
XRAY-IN
HD-OUT
VPROT
SCP-OUT
SCP
V-FUNC
VDP-OUT
VDN-OUT
VTIM-OUT
VS-IN
COUNT
AGC VOSC
W-FUNC
EW-FUNC
EW-OUT
DF-FUNC
DF-PARA
EXTRA
EXTRA-PARA
IREF
REG
IREF-SW
IREF-J
REG
V-AGC
V-OSC

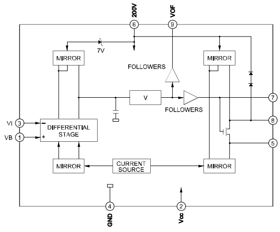
- **B3 (2/5) BOARD IC604**
  CXA1875AM


VCC
SCL
SDA
SAD2
SAD1
SAD0
SW3
SW2
LEVEL CONVERTER
LATCH
LEVEL CONVERTER
OPEN COLLECTOR
LEVEL CONVERTER
I²C DECODER
POWER ON RESET
LATCH
DAC
AMP
REG
VCC
SW1
SW0
DAC4
DAC3
DAC2
DAC1
DAC0
GND

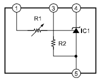
- **B3 (2/5) BOARD IC603**
- **BD (1/2) BOARD IC2612**
  TLC2932IPW


Voltage Control Oscillator
BIAS
VCO IN
VCO INHIBIT
Bias Control
Ring Oscillator
VCO Output
1/2
MUX
VCO OUT
SELECT
Phase Frequency Detector
Charge Pump
FIN A
FIN B
PFD INHIBIT
Detector
VDD
PFD OUT

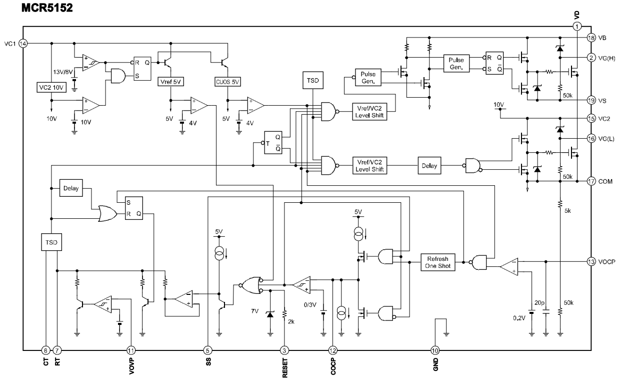
- **CR BOARD IC7101**
- **CG BOARD IC7201**
- **CB BOARD IC7301**
  TDA6111Q


200V
VOF
MIRROR
7V
FOLLOWERS
MIRROR
V
FOLLOWERS
VF
VO
IK
VI
VB
DIFFERENTIAL STAGE
MIRROR
CURRENT SOURCE
MIRROR
GND
Vcc

- **G, G1 BOARD IC6301**
  DM-58



- **G, G1 BOARD IC6004**
  MCR5152


VD
VC1
13V/8V
VC2 10V
10V
10V
Vref 5V
CLK05 5V
TSD
Pulse Gen.
Pulse Gen.
VB
VO(H)
VS
VC2
VO(L)
COM
Vref/VC2 Level Shift
Vref/VC2 Level Shift
Delay
Delay
TSD
Refresh One Shot
VOCP
5V
4V
5V
4V
5V
5V
7V
2k
0/3V
50k
5k
20p
0.2V
50k
CT
RT
VOVP
SS
RESET
COCP
GND

SECTION 8

EXPLODED VIEWS

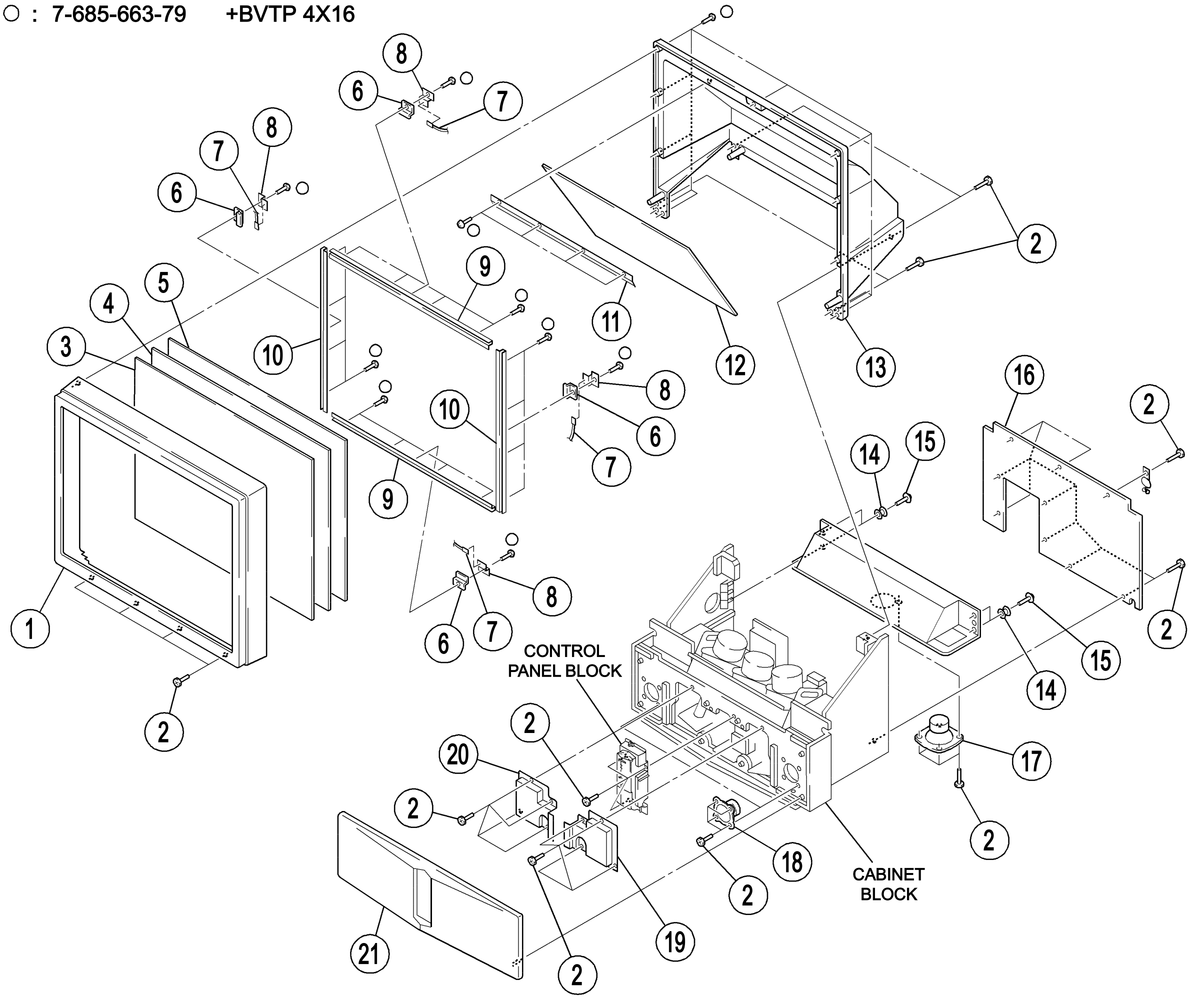
NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

8-1. SCREEN AND COVER BLOCK (KP-ES43)

○ : 7-685-663-79 +BVTP 4X16

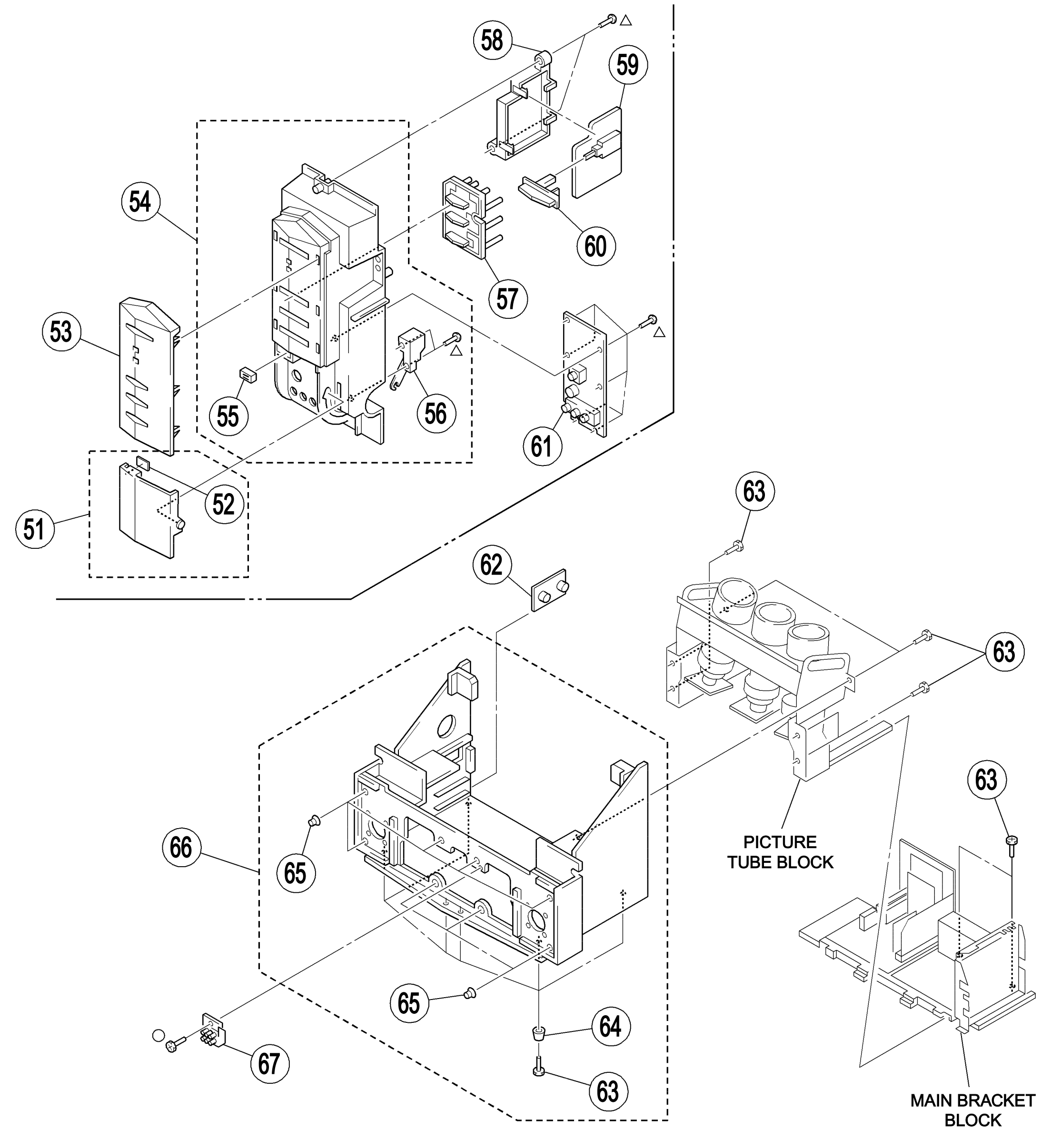


REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4037-770-1	BEZEL (43) ASSY	
2	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
3	4-076-507-11	SCREEN (43AR), CONTRAST	
4	4-075-439-11	PLATE (43L), DIFFUSION	
5	4-070-285-11	PLATE (43F), DIFFUSION	
6	* 4-205-155-01	COVER, SENSOR	
7	1-528-864-11	BATTERY, SOLAR	
8	* 4-066-132-01	HOLDER, SENSOR	
9	* 4-076-698-21	HOLDER, SCREEN	
10	* 4-076-698-31	HOLDER, SCREEN	
11	* 4-066-129-01	HOLDER, MIRROR	
12	4-076-587-01	MIRROR (43)	
13	* 4-076-588-01	COVER (43), MIRROR	
14	4-077-433-01	BUSHING, RUBBER	
15	4-058-870-01	SCREW, (4X16) W (+) P TAPPING	
16	* 4-076-578-01	BOARD (43), REAR	
17	1-529-792-11	SPEAKER (12 CM)	
18	1-529-791-11	SPEAKER (10 CM)	
19	* 4-075-384-01	COVER (R), FRONT	
20	* 4-075-385-01	COVER (L), FRONT	
21	X-4037-767-1	GRILLE ASSY, SPEAKER	

8-2. CONTROL PANEL AND CABINET BLOCK (KP-ES43)

△ : 7-685-648-79 +BVTP 3X12
○ : 7-685-663-79 +BVTP 4X16

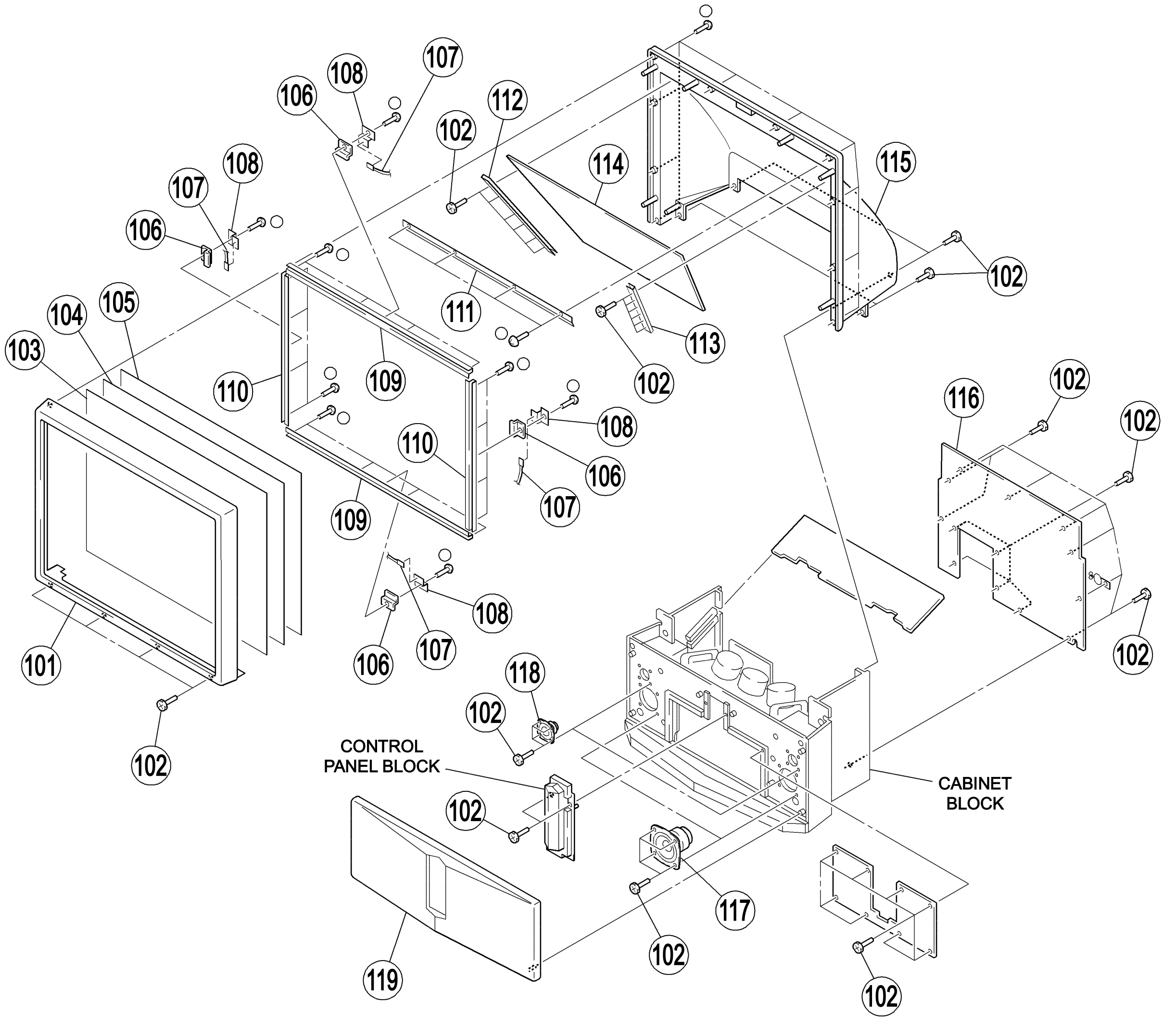
The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4037-769-1	DOOR ASSY	52
52	4-076-581-01	PLATE, CATCHER	
53	4-075-390-01	PANEL (F)	
54	X-4037-768-1	PANEL ASSY, CONTROL	55, 56
55	3-736-779-01	MAGNET	
56	4-075-383-01	DAMPER UNIT	
57	4-075-391-01	BUTTON, MALTI	
58	* 4-075-389-01	BRACKET, H1	
59	* A-1372-804-A	H2 BOARD, COMPLETE	
60	4-071-995-01	BUTTON, POWER	
61	* A-1372-803-A	H1 BOARD, COMPLETE	
62	* 1-761-348-11	PWB, MOUNTED (NET WORK)	
63	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
64	4-076-577-01	FOOT	
65	4-063-421-02	LATCH (K)	
66	* X-4037-766-1	CABINET (43) ASSY	63-65
67	⚠ 1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE) (FOCUS PACK)	

8-3. SCREEN AND COVER BLOCK (KP-ES48)

○ : 7-685-663-79 +BVTP 4X16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CONTROL
PANEL BLOCK
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CABINET
BLOCK
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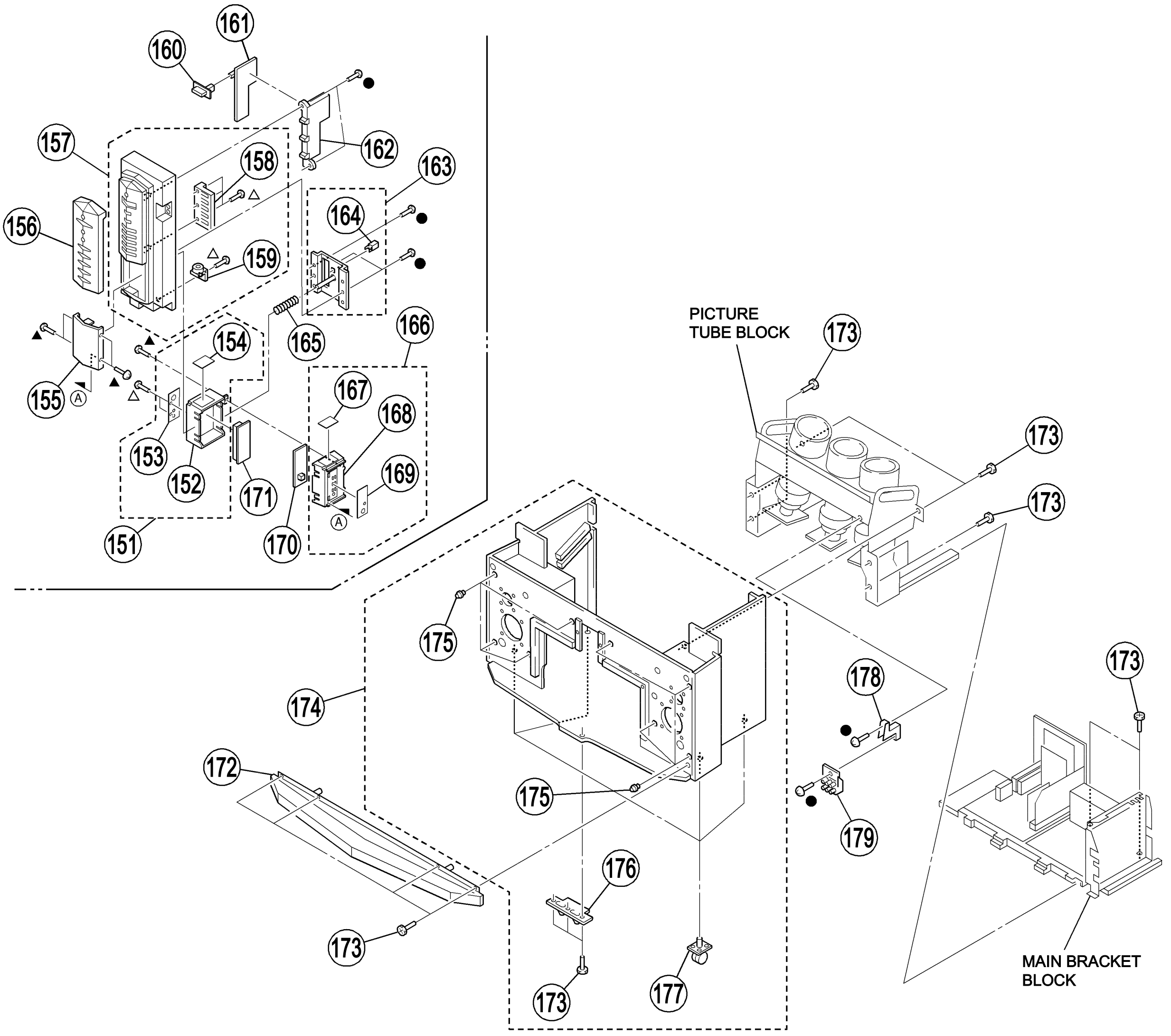
REF.NO.	PART NO.	DESCRIPTION	REMARK
101	X-4037-794-1	BEZNET (48) ASSY	
102	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
103	4-064-041-11	SCREEN (48), CONTRAST	
104	4-075-440-11	PLATE (48L), DIFFUSION	
105	4-058-455-12	PLATE (F), DIFFUSION	
106	*4-205-155-01	COVER, SENSOR	
107	1-528-864-11	BATTERY, SOLAR	
108	*4-066-132-01	HOLDER, SENSOR	
109	*4-076-698-01	HOLDER, SCREEN	
110	*4-076-698-11	HOLDER, SCREEN	
111	*4-075-234-01	HOLDER (TOP), MIRROR	
112	*4-076-705-01	HOLDER (SL), MIRROR	
113	*4-076-706-01	HOLDER (SR), MIRROR	
114	4-076-704-01	MIRROR (48)	
115	*4-076-707-01	COVER (48), MIRROR	
116	*4-076-696-01	BOARD, REAR	
117	1-529-643-11	SPEAKER (13 CM)	
118	1-529-403-11	SPEAKER (6.6 CM)	
119	X-4037-793-1	GRILLE ASSY, SPEAKER	

8-4. CONTROL PANEL AND CABINET BLOCK (KP-ES48)

▲ : 7-685-534-19 +BTP 2.6X8
△ : 7-685-648-79 +BTP 3X12
● : 7-685-663-71 +BVTP 4X16

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.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TUBE BLOCK
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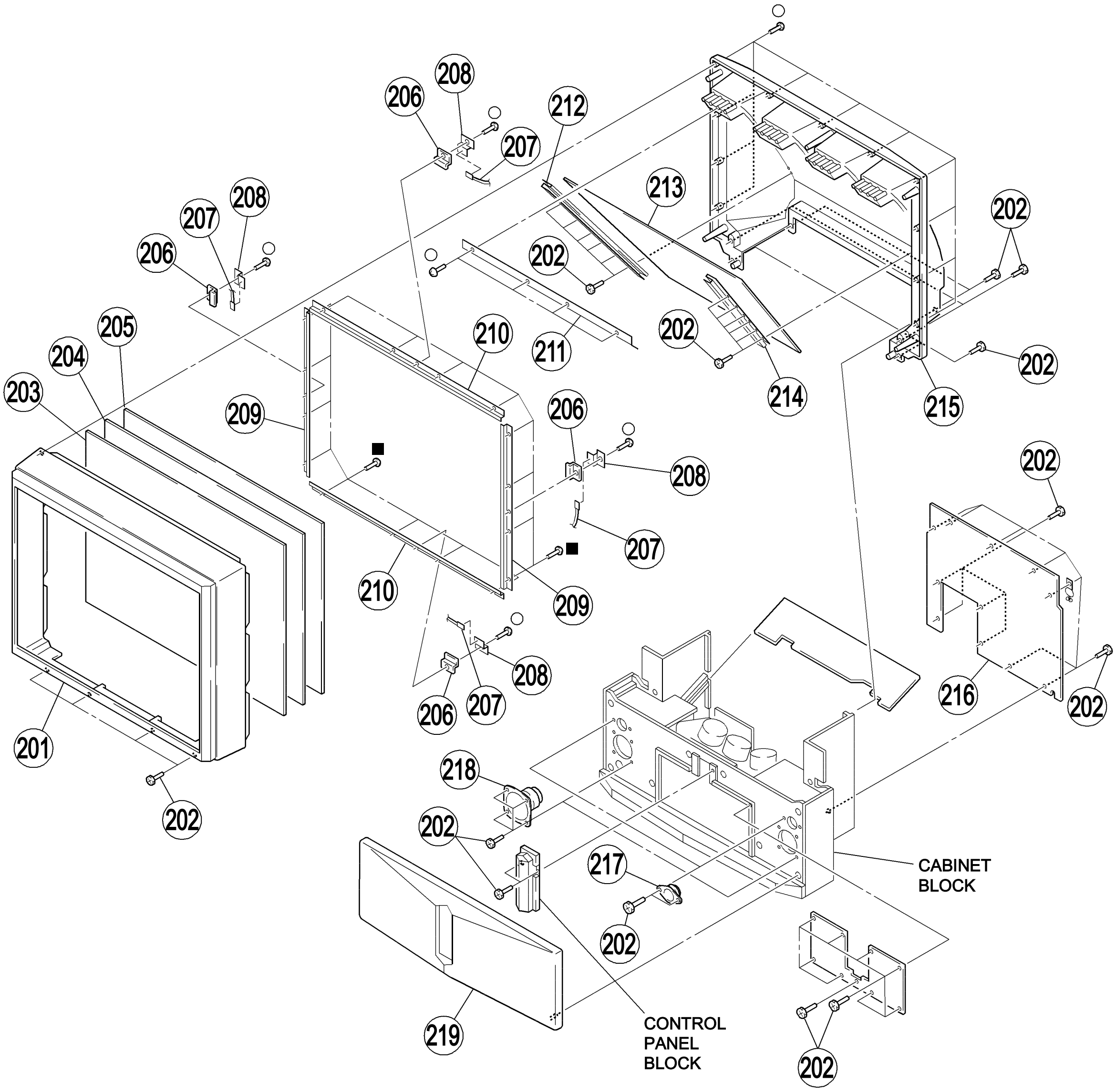
MAIN BRACKET
BLOCK

REF.NO.	PART NO.	DESCRIPTION	REMARK
151	X-4037-796-1	TRAY (L) ASSY	152-154
152	4-072-001-03	TRAY (L)	
153	4-071-990-11	LABEL (L), CONTROL	
154	4-076-702-01	LABEL (L), TOP	
155	4-071-999-12	PANEL (T)	
156	4-072-007-21	PANEL (C)	
157	X-4037-024-6	PANEL ASSY, CONTROL	158, 159
158	4-071-997-01	BUTTON, MULTI	
159	4-919-393-01	DAMPER	
160	4-071-995-01	BUTTON, POWER	
161	* A-1372-787-A	H1 BOARD, COMPLETE	
162	* 4-071-998-01	BRACKET (HA)	
163	X-4037-221-2	HOLDER ASSY, TRAY	164
164	4-047-464-01	CATCHER, PUSH	
165	4-071-987-02	SPRING (T)	
166	X-4037-795-1	TRAY (R) ASSY	167-169
167	4-076-701-01	LABEL (R), TOP	
168	4-072-000-03	TRAY (R)	
169	4-071-989-01	LABEL (R), CONTROL	
170	* A-1372-788-A	H2 BOARD, CONTROL	
171	* A-1372-789-A	H3 BOARD, CONTROL	
172	* 4-075-256-01	SKIRT, FRONT	
173	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
174	* X-4037-792-1	CABINET (48) ASSY	173, 175-177
175	4-063-421-02	LATCH (K)	
176	4-075-874-01	FOOT, PLASTIC	
177	4-075-244-01	CASTER (30 DIA.)	
178	* 4-054-825-01	BRACKET, FOCUS PACK	
179	⚠ 1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE) (FOCUS PACK)	

8-5. SCREEN AND COVER BLOCK (KP-ES53)

■ : 7-685-661-79 +BVTP 4X12
○ : 7-685-663-79 +BVTP 4X16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CABINET
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CONTROL
PANEL
BLOCK
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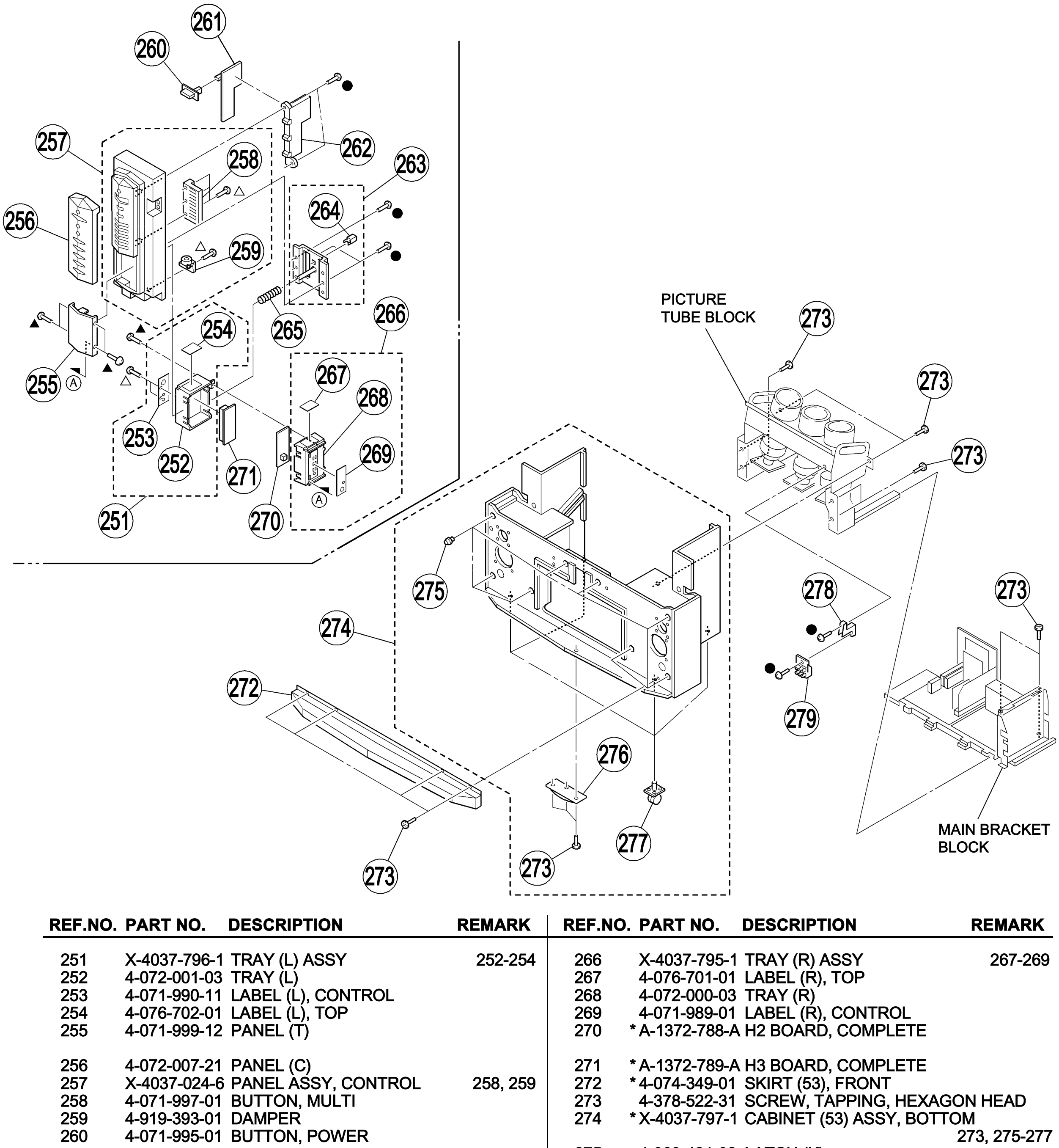
REF.NO.	PART NO.	DESCRIPTION	REMARK
201	X-4037-799-1	BEZNET (53) ASSY	
202	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
203	4-064-186-11	SCREEN (53), CONTRAST	
204	4-070-525-11	PLATE (L), DIFFUSION	
205	4-076-506-11	PLATE (53FV), DIFFUSION	
206	* 4-205-155-01	COVER, SENSOR	
207	1-528-864-11	BATTERY, SOLAR	
208	* 4-066-132-01	HOLDER, SENSOR	
209	* 4-075-270-01	HOLDER (53) S, SCREEN	
210	* 4-075-269-01	HOLDER (53) L, SCREEN	
211	* 4-075-234-01	HOLDER (TOP), MIRROR	
212	* 4-069-687-01	HOLDER (LS), MIRROR	
213	4-070-344-01	MIRROR, REFLECTION	
214	* 4-069-688-01	HOLDER (RS), MIRROR	
215	* 4-069-694-01	COVER, MIRROR	
216	* 4-076-711-01	BOARD, REAR	
217	1-529-403-11	SPEAKER (6.6 CM)	
218	1-529-405-11	SPEAKER (13 CM)	
219	X-4037-798-1	GRILLE ASSY, SPEAKER	

8-6. CONTROL PANEL AND CABINET BLOCK (KP-ES53)

▲ : 7-685-534-19 +BTP 2.6X8
△ : 7-685-648-79 +BTP 3X12
● : 7-685-663-71 +BVTP 4X16

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.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MAIN BRACKET
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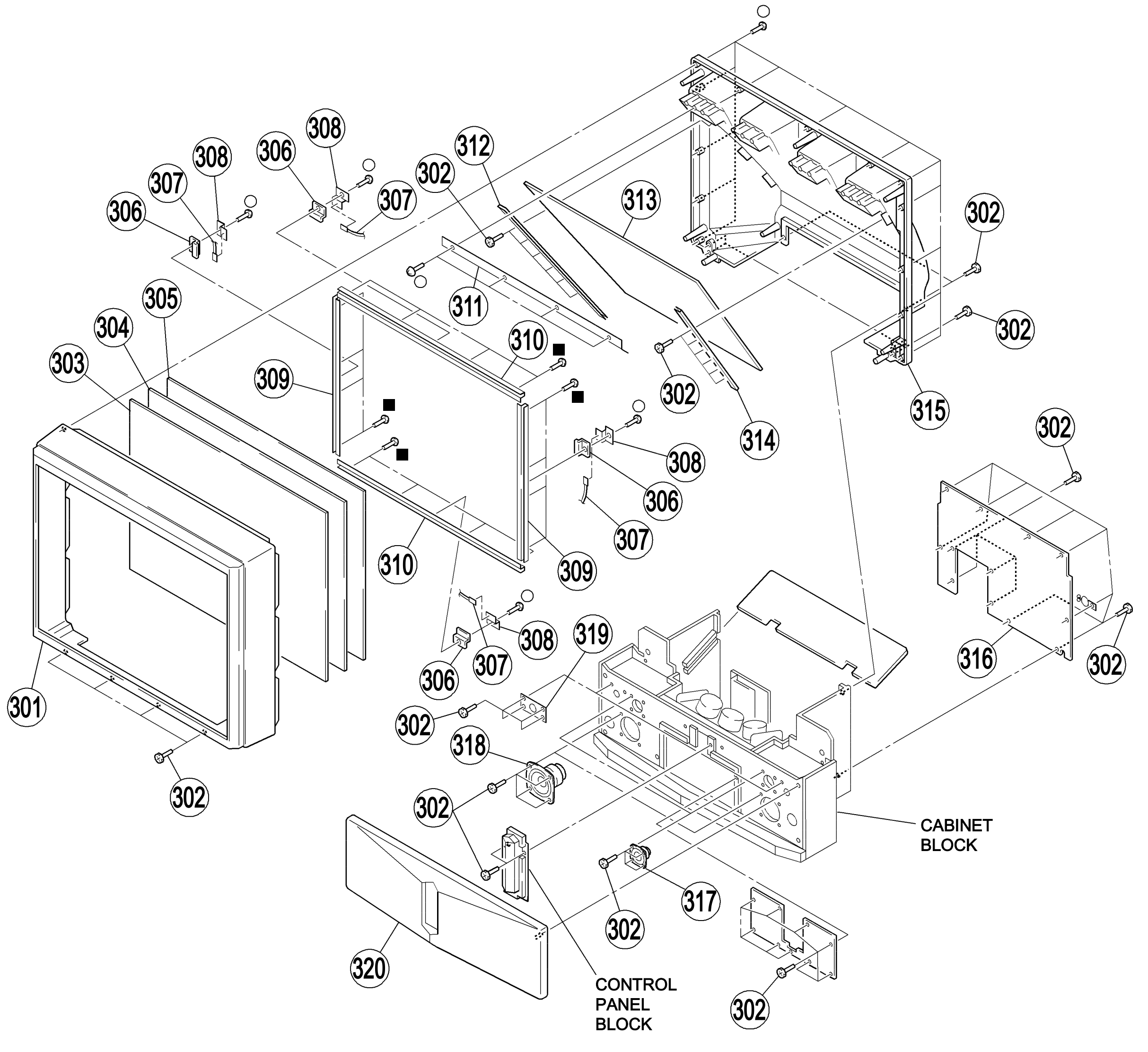
REF.NO.	PART NO.	DESCRIPTION	REMARK
251	X-4037-796-1	TRAY (L) ASSY	252-254
252	4-072-001-03	TRAY (L)	
253	4-071-990-11	LABEL (L), CONTROL	
254	4-076-702-01	LABEL (L), TOP	
255	4-071-999-12	PANEL (T)	
256	4-072-007-21	PANEL (C)	
257	X-4037-024-6	PANEL ASSY, CONTROL	258, 259
258	4-071-997-01	BUTTON, MULTI	
259	4-919-393-01	DAMPER	
260	4-071-995-01	BUTTON, POWER	
261	* A-1372-787-A	H1 BOARD, COMPLETE	
262	* 4-071-998-01	BRACKET (HA)	
263	X-4037-221-2	HOLDER ASSY, TRAY	264
264	4-047-464-01	CATCHER, PUSH	
265	4-071-987-02	SPRING (T)	
266	X-4037-795-1	TRAY (R) ASSY	267-269
267	4-076-701-01	LABEL (R), TOP	
268	4-072-000-03	TRAY (R)	
269	4-071-989-01	LABEL (R), CONTROL	
270	* A-1372-788-A	H2 BOARD, COMPLETE	
271	* A-1372-789-A	H3 BOARD, COMPLETE	
272	* 4-074-349-01	SKIRT (53), FRONT	
273	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
274	* X-4037-797-1	CABINET (53) ASSY, BOTTOM	273, 275-277
275	4-063-421-02	LATCH (K)	
276	4-075-874-01	FOOT, PLASTIC	
277	* 4-075-244-01	CASTER (DIA. 30)	
278	* 4-054-825-01	BRACKET, FOCUS PACK	
279	⚠ 1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE) (FOCUS PACK)	

8-7. SCREEN AND COVER BLOCK (KP-ES61)

■ : 7-685-661-79 +BVTP 4X12
○ : 7-685-663-79 +BVTP 4X16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CABINET BLOCK
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CONTROL PANEL BLOCK
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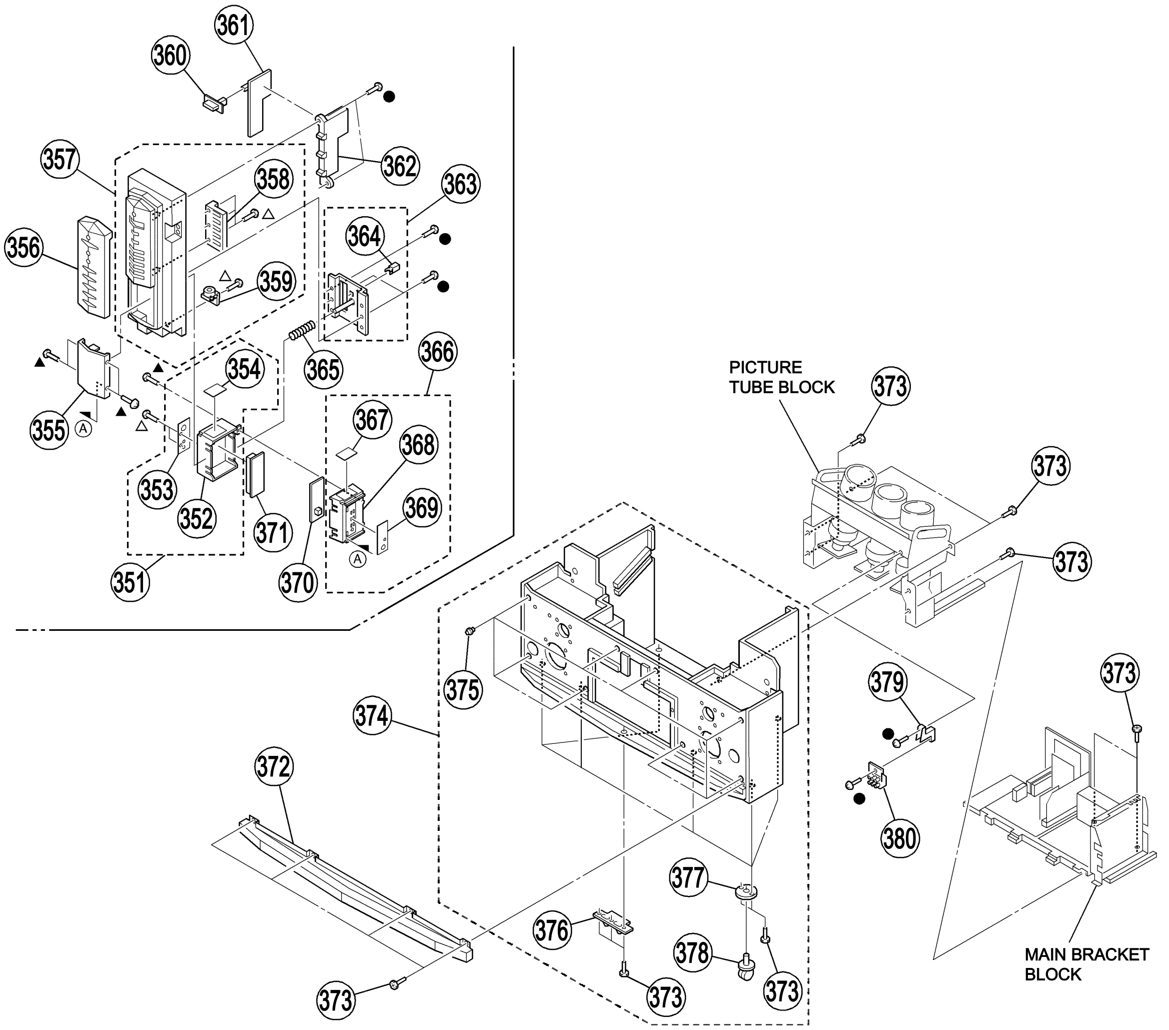
REF.NO.	PART NO.	DESCRIPTION	REMARK
301	X-4037-791-1	BEZNET (61) ASSY	
302	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
303	4-071-950-11	SCREEN (61), CONTRAST	
304	4-070-283-11	PLATE (L), DIFFUSION	
305	4-066-082-11	PLATE (F), DIFFUSION	
306	* 4-205-155-01	COVER, SENSOR	
307	1-528-864-11	BATTERY, SOLAR	
308	* 4-066-132-01	HOLHDER, SENSOR	
309	4-072-006-01	HOLDER (V61), SCREEN	
310	4-072-005-01	HOLDER (H61), SCREEN	
311	* 4-070-345-01	HOLDER (TOP), MIRROR	
312	* 4-069-689-01	HOLDER (L), MIRROR	
313	4-070-922-01	MIRROR, REFLECTION	
314	* 4-069-690-01	HOLDER (R), MIRROR	
315	* 4-069-695-01	COVER, MIRROR	
316	* 4-076-692-01	BOARD, REAR	
317	1-529-758-11	SPEAKER (8 CM)	
318	1-529-759-11	SPEAKER (16 CM)	
319	1-529-757-11	SPEAKER (2.7 CM)	
320	X-4037-790-1	GRILLE (61) ASSY, SPEAKER	

8-8. CONTROL PANEL AND CABINET BLOCK (KP-ES61)

▲ : 7-685-534-19 +BTP 2.6X8
△ : 7-685-648-79 +BVTP 3X12
● : 7-685-663-71 +BVTP 4X16

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.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PICTURE TUBE BLOCK
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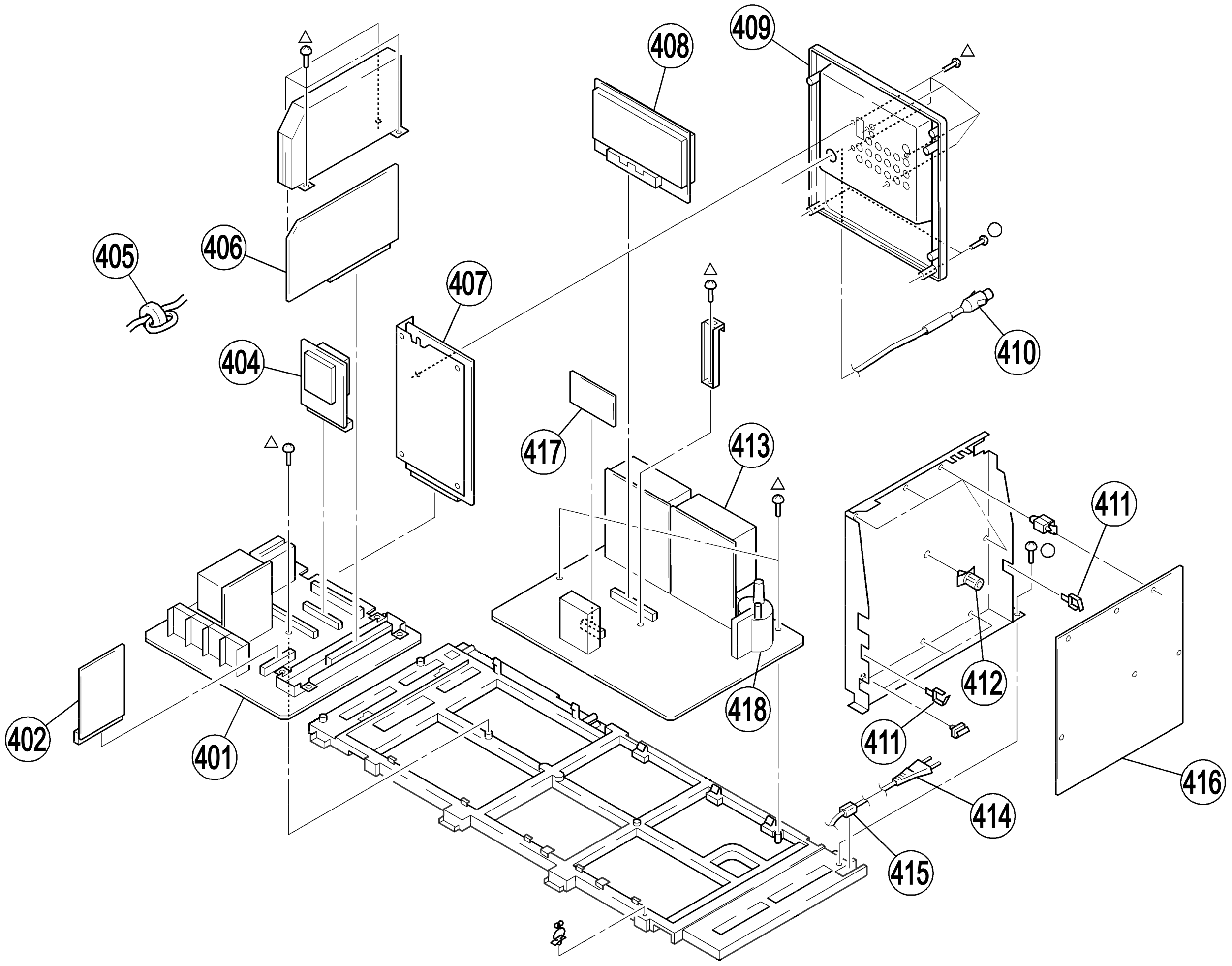
MAIN BRACKET BLOCK

REF.NO.	PART NO.	DESCRIPTION	REMARK
351	X-4037-796-1	TRAY (L) ASSY	352-354
352	4-072-001-03	TRAY (L)	
353	4-071-990-11	LABEL (L), CONTROL	
354	4-076-702-01	LABEL (L), TOP	
355	4-071-999-12	PANEL (T)	
356	4-072-007-21	PANEL (C)	
357	X-4037-024-6	PANEL ASSY, CONTROL	358, 359
358	4-071-997-01	BUTTON, MULTI	
359	4-919-393-01	DAMPER	
360	4-071-995-01	BUTTON, POWER	
361	* A-1372-787-A	H1 BOARD, COMPLETE	
362	* 4-071-998-01	BRACKET (HA)	
363	X-4037-221-2	HOLDER ASSY, TRAY	364
364	4-047-464-01	CATCHER, PUSH	
365	4-071-987-02	SPRING (T)	
366	X-4037-795-1	TRAY (R) ASSY	367-369
367	4-076-701-01	LABEL (R), TOP	
368	4-072-000-03	TRAY (R)	
369	4-071-989-01	LABEL (R), CONTROL	
370	* A-1372-788-A	H2 BOARD, COMPLETE	
371	* A-1372-789-A	H3 BOARD, COMPLETE	
372	4-072-013-11	SKIRT (61), FRONT	
373	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
374	* X-4037-789-1	CABINET (61) ASSY	373, 375-378
375	4-063-421-02	LATCH (K)	
376	4-075-874-01	FOOT, PLASTIC	
377	4-030-850-01	SOCKET, CASTER	
378	4-039-546-01	CASTER	
379	* 4-054-825-01	BRACKET, FOCUS PACK	
380	⚠1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE) (FOCUS PACK)	

8-9. MAIN BRACKET BLOCK

△ : 7-685-648-79 +BVTP 3X12
○ : 7-685-663-79 +BVTP 4X16

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.



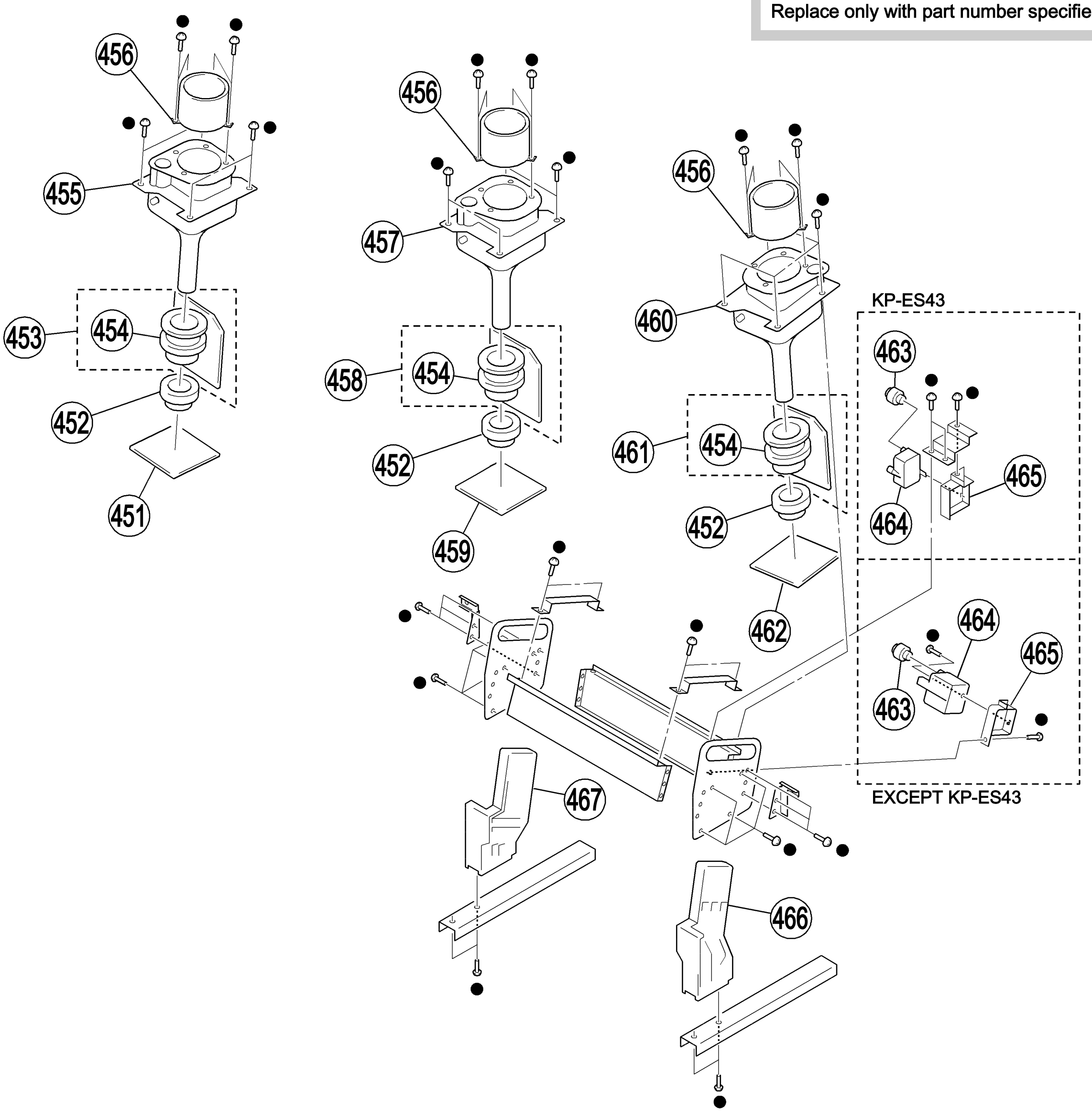
REF.NO.	PART NO.	DESCRIPTION	REMARK
401	* A-1299-176-A	A1 BOARD, COMPLETE	
402	* A-1346-922-A	E BOARD, COMPLETE	
404	* A-1306-588-A	M1 BOARD, COMPLETE	
405	1-543-982-11	CORE, FERRITE	
406	* A-1136-087-A	B3 BOARD, COMPLETE	
407	* A-1394-982-A	J1 BOARD, COMPLETE	
408	* A-1136-088-A	BD BOARD, COMPLETE	
409	4-076-679-01	TERMINAL BOARD	
410	1-790-082-11	CABLE, RF	
411	* 4-316-015-00	HOLDER, WIRE	
412	* 4-046-677-11	HOLDER (B), PRINTED CIRCUIT BOARD	
413	* A-1346-923-A	D BOARD, COMPLETE (ES48)	
413	* A-1346-924-A	D BOARD, COMPLETE (ES53)	
413	* A-1346-925-A	D BOARD, COMPLETE (ES61)	
413	* A-1346-937-A	D BOARD, COMPLETE (ES43)	

REF.NO.	PART NO.	DESCRIPTION	REMARK
414	⚠1-574-062-52	CORD, POWER (WITH CONNECTOR) (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
414	⚠1-792-002-11	CORD, POWER (WITH FILTER) (ES43HK1, ES48HK1, ES53HK1, ES61HK1)	
414	⚠1-792-035-11	CORD, POWER (WITH FILTER) (ES43SN1, ES48SN1, ES53SN1, ES61SN1)	
415	4-022-115-00	HOLDER, AC CORD	
416	* A-1316-514-A	G1 BOARD, COMPLETE (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
416	* A-1316-528-A	G BOARD, COMPLETE (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)	
417	* A-1343-830-A	DS BOARD, COMPLETE	
418	⚠1-453-335-11	TRANSFORMER ASSY, FLYBACK	NX-4010//M

8-10. PICTURE TUBE BLOCK

● : 7-685-663-71 +BVTP 4X16

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK
451	* A-1332-037-A	CR BOARD, COMPLETE	
452	⚠1-452-790-41	NECK ASSY (NA-295)	
453	* A-1391-025-A	ZR BOARD, COMPLETE	454
454	⚠1-451-476-21	DEFLECTION YOKE	
455	⚠8-733-571-15	PICTURE TUBE 07MXC2 (R) (HEATER)	(ES43)
455	⚠8-733-572-15	PICTURE TUBE 07MXC3 (R) (HEATER)	(ES48, ES53)
455	⚠8-733-573-15	PICTURE TUBE 07MXC4 (R) (HEATER)	(ES61)
456	4-040-131-21	LENS (LINNIT POINT 6) (ES61)	
456	4-056-258-11	LENS (DELTA 78) (EXCEPT ES61)	
457	⚠8-733-570-15	PICTURE TUBE 07MXC2 (G) (HEATER)	
458	* A-1391-026-A	ZG BOARD, COMPLETE	454
459	* A-1332-038-A	CG BOARD, COMPLETE	
460	⚠8-733-574-15	PICTURE TUBE 07MAC2 (B) (HEATER)	(ES43)
460	⚠8-733-575-15	PICTURE TUBE 07MAC3 (B) (HEATER)	(ES48, ES53)
460	⚠8-733-576-15	PICTURE TUBE 07MAC4 (B) (HEATER)	(ES61)
461	* A-1391-027-A	ZB BOARD, COMPLETE	454
462	* A-1332-039-A	CB BOARD, COMPLETE	
463	4-373-137-01	CAP (Z), RUBBER	
464	⚠8-598-955-12	BLOCK ASSY, HIGH-VOLTAGE	
465	* 4-066-144-02	HOLDER, HVR	
466	* 4-066-135-01	STAY (R), SIDE	
467	* 4-066-134-01	STAY (L), SIDE	

SECTION 9

ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS
  PF : μμF
- There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

REF.NO.	PART NO.	DESCRIPTION			REMARK
	* A-1372-787-A	H1 BOARD, COMPLETE			
					(ES48, ES53, ES61)
		******************************			
	* 4-072-004-01	HOLDER, LED (D3002)			
		<CAPACITOR>			
C3101	1-126-157-11	ELECT	10μF	20%	16V
		<CONNECTOR>			
CN3101	* 1-564-519-11	PLUG, CONNECTOR 4P			
CN3102	* 1-564-525-11	PLUG, CONNECTOR 10P			
CN3103	* 1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P			
CN3104	* 1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P			
		<DIODE>			
D3002	8-719-064-11	DIODE SPR-325MVW			
					(ON/STANDBY/TIMER)
		<IC>			
IC3101	8-742-205-30	HYB IC SBX3081-01(30)			
		<TRANSISTOR>			
Q3101	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q3102	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
		<RESISTOR>			
R3101	1-208-780-11	METAL CHIP	820	0.5%	1/10W
R3102	1-208-788-11	METAL CHIP	1.8K	0.5%	1/10W
R3103	1-208-793-11	METAL CHIP	3K	0.5%	1/10W
R3104	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R3105	1-216-041-00	RES-CHIP	470	5%	1/10W
R3106	1-216-037-00	RES-CHIP	330	5%	1/10W
R3107	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R3108	1-216-049-91	RES-CHIP	1K	5%	1/10W
R3109	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R3110	1-216-295-91	SHORT	0		
R3111	1-216-295-91	SHORT	0		
R3112	1-216-295-91	SHORT	0		
R3113	1-216-033-00	RES-CHIP	220	5%	1/10W
R3115	1-208-804-11	METAL CHIP	8.2K	0.5%	1/10W
		<SWITCH>			
S3101	1-692-431-21	SWITCH, TACTIL (PROG +)			
S3102	1-692-431-21	SWITCH, TACTIL (PROG –)			
S3103	1-692-431-21	SWITCH, TACTIL (VOL +)			
S3104	1-692-431-21	SWITCH, TACTIL (VOL –)			
S3105	1-692-431-21	SWITCH, TACTIL (TV/VIDEO)			
S3106	⚠1-571-433-31	SWITCH, PUSH (AC POWER) (POWER)			

****

REF.NO.	PART NO.	DESCRIPTION			REMARK
	* A-1372-803-A	H1 BOARD, COMPLETE (ES43)			
		******************************			
	* 4-072-004-01	HOLDER, LED (D3101)			
		<CAPACITOR>			
C3101	1-126-157-11	ELECT	10μF	20%	16V
		<CONNECTOR>			
CN3101	* 1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P			
CN3102	* 1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P			
CN3103	* 1-564-508-11	PLUG, CONNECTOR 5P			
		<DIODE>			
D3103	8-719-064-11	DIODE SPR-325MVW			
					(ON/STANDBY/TIMER)
		<IC>			
IC3101	8-742-205-30	HYB IC SBX3081-01(30)			

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

H1 H2

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
Q3101	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q3102	8-729-120-28	TRANSISTOR 2SC1623-L5L6				

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R3101	1-216-295-91	SHORT	0			
R3102	1-216-037-00	RES-CHIP	330	5%	1/10W	
R3103	1-216-295-91	SHORT	0			
R3104	1-216-295-91	SHORT	0			
R3105	1-216-037-00	RES-CHIP	330	5%	1/10W	
R3106	1-216-295-91	SHORT	0			
R3107	1-216-041-00	RES-CHIP	470	5%	1/10W	
R3108	1-208-806-11	METAL CHIP	10K	0.5%	1/10W	
R3109	1-208-806-11	METAL CHIP	10K	0.5%	1/10W	

<SWITCH>

REF.NO.	PART NO.	DESCRIPTION				REMARK
S3101	⚠1-571-433-31	SWITCH, PUSH (AC POWER) (POWER)				

****

* A-1372-788-A H2 BOARD, COMPLETE
(ES48, ES53, ES61)
****

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C3201	1-126-157-11	ELECT	10μF	20%	16V	
C3202	1-163-037-11	CERAMIC CHIP	0.022μF	10%	50V	
C3203	1-163-037-11	CERAMIC CHIP	0.022μF	10%	50V	
C3204	1-163-037-11	CERAMIC CHIP	0.022μF	10%	50V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
CN3201	* 1-564-519-11	PLUG, CONNECTOR 4P				
CN3202	* 1-564-520-11	PLUG, CONNECTOR 5P				

<DIODE>

REF.NO.	PART NO.	DESCRIPTION				REMARK
D3203	8-719-976-96	DIODE DTZ4.7C				

<JACK>

REF.NO.	PART NO.	DESCRIPTION				REMARK
J3201	1-691-293-11	JACK (HEAD PHONE)				

<CHIP CONDUCTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
JR3206	1-216-295-91	SHORT	0			

<COIL>

REF.NO.	PART NO.	DESCRIPTION				REMARK
L3201	1-414-189-31	INDUCTOR	100μH			
L3202	1-414-189-31	INDUCTOR	100μH			

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
Q3201	8-729-120-28	TRANSISTOR 2SC1623-L5L6				

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R3200	1-216-295-91	SHORT	0			
R3201	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W	
R3202	1-208-792-11	METAL CHIP	2.7K	0.5%	1/10W	
R3203	1-208-785-11	METAL CHIP	1.3K	0.5%	1/10W	
R3204	1-208-806-11	METAL CHIP	10K	0.5%	1/10W	
R3205	1-216-295-91	SHORT	0			
R3206	1-216-073-00	RES-CHIP	10K	5%	1/10W	
R3207	1-216-033-00	RES-CHIP	220	5%	1/10W	
R3208	1-216-033-00	RES-CHIP	220	5%	1/10W	
R3209	1-216-033-00	RES-CHIP	220	5%	1/10W	
R3210	1-216-033-00	RES-CHIP	220	5%	1/10W	
R3212	1-216-295-91	SHORT	0			
R3213	1-216-295-91	SHORT	0			
R3219	1-216-033-00	RES-CHIP	220	5%	1/10W	

<SWITCH>

REF.NO.	PART NO.	DESCRIPTION				REMARK
S3201	1-572-198-11	SWITCH, KEYBOARD (MENU)				
S3202	1-572-198-11	SWITCH, KEYBOARD (MENU +)				
S3203	1-572-198-11	SWITCH, KEYBOARD (MENU –)				
S3204	1-572-198-11	SWITCH, KEYBOARD (ENTER)				
S3205	1-572-198-11	SWITCH, KEYBOARD (AUTO CONVER)				
S3206	1-572-198-11	SWITCH, KEYBOARD (AUTO PROGR)				

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* A-1372-804-A H2 BOARD, COMPLETE (ES43)
****

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C3201	1-126-157-11	ELECT	10μF	20%	16V	
C3202	1-163-037-11	CERAMIC CHIP	0.022μF	10%	50V	
C3203	1-163-037-11	CERAMIC CHIP	0.022μF	10%	50V	
C3206	1-163-037-11	CERAMIC CHIP	0.022μF	10%	50V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
CN3201	* 1-564-519-11	PLUG, CONNECTOR 4P				
CN3202	* 1-564-520-11	PLUG, CONNECTOR 5P				
CN3203	* 1-564-526-31	PLUG, CONNECTOR 11P				

<DIODE>

REF.NO.	PART NO.	DESCRIPTION				REMARK
D3207	8-719-976-96	DIODE DTZ4.7C				

<JACK>

REF.NO.	PART NO.	DESCRIPTION				REMARK
J3201	1-691-293-11	JACK (HEAD PHONE)				
J3202	1-565-665-12	TERMINAL, S 4P (VIDEO IN 4/S VIDEO)				
J3203	1-565-745-11	PIN JACK BLOCK 3P (VIDEO IN 4)				

The components identified by shading
and mark ⚠ are critical for safety.
Replace only with part number specified.

<COIL>

REF.NO.	PART NO.	DESCRIPTION			REMARK
L3201	1-414-189-31	INDUCTOR	100μH		
L3202	1-414-189-31	INDUCTOR	100μH		

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q3201	8-729-120-28	TRANSISTOR 2SC1623-L5L6	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
R3201	1-208-780-11	METAL CHIP	820	0.5%	1/10W
R3202	1-208-788-11	METAL CHIP	1.8K	0.5%	1/10W
R3203	1-208-793-11	METAL CHIP	3K	0.5%	1/10W
R3204	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R3205	1-208-804-11	METAL CHIP	8.2K	0.5%	1/10W
R3206	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R3207	1-208-792-11	METAL CHIP	2.7K	0.5%	1/10W
R3208	1-208-785-11	METAL CHIP	1.3K	0.5%	1/10W
R3209	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R3210	1-216-295-91	SHORT	0		
R3211	1-216-295-91	SHORT	0		
R3212	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3213	1-216-033-00	RES-CHIP	220	5%	1/10W
R3214	1-216-033-00	RES-CHIP	220	5%	1/10W
R3215	1-216-033-00	RES-CHIP	220	5%	1/10W
R3216	1-216-033-00	RES-CHIP	220	5%	1/10W
R3217	1-216-025-91	RES-CHIP	100	5%	1/10W
R3218	1-216-025-91	RES-CHIP	100	5%	1/10W
R3219	1-216-033-00	RES-CHIP	220	5%	1/10W

<SWITCH>

REF.NO.	PART NO.	DESCRIPTION	REMARK
S3201	1-572-198-11	SWITCH, KEYBOARD (PROG +)	
S3202	1-572-198-11	SWITCH, KEYBOARD (PROG –)	
S3203	1-572-198-11	SWITCH, KEYBOARD (VOL +)	
S3204	1-572-198-11	SWITCH, KEYBOARD (VOL –)	
S3205	1-572-198-11	SWITCH, KEYBOARD (TV/VIDEO)	
S3206	1-572-198-11	SWITCH, KEYBOARD (MENU)	
S3207	1-572-198-11	SWITCH, KEYBOARD (MENU +)	
S3208	1-572-198-11	SWITCH, KEYBOARD (MENU –)	
S3209	1-572-198-11	SWITCH, KEYBOARD (ENTER)	
S3210	1-572-198-11	SWITCH, KEYBOARD (AUTO CONVER)	
S3211	1-572-198-11	SWITCH, KEYBOARD (AUTO PROGR)	

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* A-1372-789-A H3 BOARD, COMPLETE
(ES48, ES53, ES61)
****

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN3301	* 1-564-526-31	PLUG, CONNECTOR 11P	

<JACK>

REF.NO.	PART NO.	DESCRIPTION	REMARK
J3301	1-568-807-21	TERMINAL BLOCK, (S) 4P (VIDEO IN 4)	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
R3301	1-216-025-00	RES-CHIP	100	5%	1/10W
R3302	1-216-025-00	RES-CHIP	100	5%	1/10W

****

* A-1391-025-A ZR BOARD, COMPLETE
****

4-382-854-11 SCREW (M3X10), P, SW (+)
(Q7408, Q7409)

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C7401	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C7402	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C7403	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C7404	1-104-664-11	ELECT	47μF	20%	16V
C7405	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C7406	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C7407	1-104-989-91	MYLAR	0.0022μF	10%	200V
C7408	1-104-989-91	MYLAR	0.0022μF	10%	200V
C7409	1-107-667-11	ELECT	2.2μF	20%	160V
C7410	1-130-471-00	MYLAR	0.001μF	5%	50V
C7411	1-130-471-00	MYLAR	0.001μF	5%	50V
C7412	1-107-364-11	MYLAR	0.01μF	10%	200V
C7413	1-126-968-11	ELECT	100μF	20%	50V
C7414	1-126-968-11	ELECT	100μF	20%	50V
C7415	1-107-645-11	ELECT	22μF	20%	200V
C7416	1-161-830-00	CERAMIC	0.0047μF		500V
C7418	1-126-935-11	ELECT	470μF	20%	6.3V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN7401	* 1-564-509-11	PLUG, CONNECTOR 6P	
CN7403	* 1-564-518-11	PLUG, CONNECTOR 3P	
CN7404	* 1-564-507-11	PLUG, CONNECTOR 4P	
CN7405	* 1-580-844-11	PIN, CONNECTOR (POWER)	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D7401	8-719-988-61	DIODE 1SS355TE-17	
D7403	8-719-921-86	DIODE MTZJ-13	
D7404	8-719-921-86	DIODE MTZJ-13	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
DY7401 ⚠	1-451-476-21	DEFLECTION YOKE (R)	

<COIL>

REF.NO.	PART NO.	DESCRIPTION		REMARK
L7401	1-412-911-11	FERRITE	0μH	
L7402	1-414-187-11	INDUCTOR	47μH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q7401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q7402	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
Q7403	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q7404	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
Q7405	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q7406	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q7407	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA			
Q7408	8-729-045-04	TRANSISTOR 2SC5511			
Q7409	8-729-045-05	TRANSISTOR 2SA2005			
Q7410	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
	<RESISTOR>				
R7401	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R7402	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R7403	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R7404	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R7405	1-216-475-11	METAL OXIDE	120	5%	3W
R7406	1-216-073-00	RES-CHIP	10K	5%	1/10W
R7407	1-249-385-11	CARBON	2.2	5%	1/4W
R7408	1-216-475-11	METAL OXIDE	120	5%	3W
R7409	1-216-009-91	RES-CHIP	22	5%	1/10W
R7410	1-216-009-91	RES-CHIP	22	5%	1/10W
R7411	1-249-414-11	CARBON	560	5%	1/4W
R7412	1-216-033-00	RES-CHIP	220	5%	1/10W
R7413	1-216-049-91	RES-CHIP	1K	5%	1/10W
R7414	1-216-033-00	RES-CHIP	220	5%	1/10W
R7415	1-216-049-91	RES-CHIP	1K	5%	1/10W
R7416	1-216-001-00	RES-CHIP	10	5%	1/10W
R7417	1-249-414-11	CARBON	560	5%	1/4W
R7418	1-216-001-00	RES-CHIP	10	5%	1/10W
R7419	1-249-415-11	CARBON	680	5%	1/4W
R7420	1-249-433-11	CARBON	22K	5%	1/4W
R7421	1-249-433-11	CARBON	22K	5%	1/4W
R7422	1-249-415-11	CARBON	680	5%	1/4W
R7423	1-249-417-11	CARBON	1K	5%	1/4W
R7424	1-249-405-11	CARBON	100	5%	1/4W
R7425	1-249-385-11	CARBON	2.2	5%	1/4W
R7426	1-249-385-11	CARBON	2.2	5%	1/4W
R7427	1-249-405-11	CARBON	100	5%	1/4W
R7428	1-215-913-11	METAL OXIDE	220	5%	3W
R7431	1-216-049-91	RES-CHIP	1K	5%	1/10W
R7432	1-216-025-91	RES-CHIP	100	5%	1/10W
R7433	1-216-009-91	RES-CHIP	22	5%	1/10W
R7434	1-216-295-91	SHORT	0		

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* A-1391-026-A ZG BOARD, COMPLETE
****

REF.NO.	PART NO.	DESCRIPTION			REMARK
	4-382-854-11	SCREW (M3X10), P, SW (+)			(Q7608, Q7609)
	<CAPACITOR>				
C7601	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C7602	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C7603	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C7604	1-104-664-11	ELECT	47µF	20%	16V
C7605	1-104-989-91	MYLAR	0.0022µF	10%	200V
C7606	1-104-989-91	MYLAR	0.0022µF	10%	200V
C7607	1-107-667-11	ELECT	2.2µF	20%	160V
C7608	1-130-471-00	MYLAR	0.001µF	5%	50V
C7609	1-130-471-00	MYLAR	0.001µF	5%	50V
C7610	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C7611	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C7612	1-107-364-11	MYLAR	0.01µF	10%	200V
C7613	1-126-968-11	ELECT	100µF	20%	50V
C7614	1-126-968-11	ELECT	100µF	20%	50V
C7615	1-107-645-11	ELECT	22µF	20%	200V
C7616	1-161-830-00	CERAMIC	0.0047µF		500V
C7617	1-106-220-00	MYLAR	0.1µF	10%	100V
C7618	1-106-220-00	MYLAR	0.1µF	10%	100V
C7620	1-126-935-11	ELECT	470µF	20%	6.3V
C7621	1-126-960-11	ELECT	1µF	20%	50V
	<CONNECTOR>				
CN7601	* 1-564-509-11	PLUG, CONNECTOR 6P			
CN7602	* 1-564-509-11	PLUG, CONNECTOR 6P			
CN7603	* 1-564-507-11	PLUG, CONNECTOR 4P			
CN7604	* 1-564-506-11	PLUG, CONNECTOR 3P			
CN7605	* 1-564-506-11	PLUG, CONNECTOR 3P			
CN7606	* 1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P			
CN7607	* 1-564-506-11	PLUG, CONNECTOR 3P			
CN7608	* 1-564-507-11	PLUG, CONNECTOR 4P			
CN7609	1-695-915-11	TAB (CONTACT)			
	<DIODE>				
D7601	8-719-921-86	DIODE MTZJ-13			
D7602	8-719-921-86	DIODE MTZJ-13			
D7603	8-719-988-61	DIODE 1SS355TE-17			
	<CONNECTOR>				
DY7601	⚠ 1-451-476-21	DEFLECTION YOKE (G)			
	<COIL>				
L7601	1-412-911-11	FERRITE	0µH		
L7602	1-414-187-11	INDUCTOR	47µH		
	<TRANSISTOR>				
Q7601	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q7602	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q7603	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA			
Q7604	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
Q7605	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q7606	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
Q7607	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q7608	8-729-045-04	TRANSISTOR 2SC5511			
Q7609	8-729-045-05	TRANSISTOR 2SA2005			
Q7610	8-729-120-28	TRANSISTOR 2SC1623-L5L6			

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
R7601	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R7602	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R7603	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R7604	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R7605	1-216-475-11	METAL OXIDE	120	5%	3W
R7606	1-216-033-00	RES-CHIP	220	5%	1/10W
R7607	1-216-033-00	RES-CHIP	220	5%	1/10W
R7608	1-249-393-11	CARBON	10	5%	1/4W
R7609	1-216-001-00	RES-CHIP	10	5%	1/10W
R7610	1-249-385-11	CARBON	2.2	5%	1/4W
R7611	1-216-475-11	METAL OXIDE	120	5%	3W
R7612	1-249-414-11	CARBON	560	5%	1/4W
R7613	1-216-073-00	RES-CHIP	10K	5%	1/10W
R7614	1-249-414-11	CARBON	560	5%	1/4W
R7615	1-249-415-11	CARBON	680	5%	1/4W
R7616	1-249-433-11	CARBON	22K	5%	1/4W
R7617	1-249-433-11	CARBON	22K	5%	1/4W
R7618	1-249-415-11	CARBON	680	5%	1/4W
R7619	1-216-009-91	RES-CHIP	22	5%	1/10W
R7620	1-216-009-91	RES-CHIP	22	5%	1/10W
R7621	1-249-417-11	CARBON	1K	5%	1/4W
R7622	1-216-049-91	RES-CHIP	1K	5%	1/10W
R7623	1-216-049-91	RES-CHIP	1K	5%	1/10W
R7624	1-249-405-11	CARBON	100	5%	1/4W
R7625	1-249-385-11	CARBON	2.2	5%	1/4W
R7626	1-249-385-11	CARBON	2.2	5%	1/4W
R7627	1-249-405-11	CARBON	100	5%	1/4W
R7628	1-215-913-11	METAL OXIDE	220	5%	3W
R7631	1-216-049-91	RES-CHIP	1K	5%	1/10W
R7632	1-216-025-91	RES-CHIP	100	5%	1/10W
R7633	1-216-009-91	RES-CHIP	22	5%	1/10W
R7634	1-216-295-91	SHORT	0		

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* A-1391-027-A ZB BOARD, COMPLETE

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4-382-854-11 SCREW (M3X10), P, SW (+) (Q7808, Q7809)

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C7801	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C7802	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C7803	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C7804	1-104-664-11	ELECT	47μF	20%	16V
C7805	1-104-989-91	MYLAR	0.0022μF	10%	200V
C7806	1-104-989-91	MYLAR	0.0022μF	10%	200V
C7807	1-107-667-11	ELECT	2.2μF	20%	160V
C7808	1-130-471-00	MYLAR	0.001μF	5%	50V
C7809	1-130-471-00	MYLAR	0.001μF	5%	50V
C7810	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C7811	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C7812	1-107-364-11	MYLAR	0.01μF	10%	200V
C7813	1-126-968-11	ELECT	100μF	20%	50V
C7814	1-126-968-11	ELECT	100μF	20%	50V
C7815	1-107-645-11	ELECT	22μF	20%	200V
C7816	1-161-830-00	CERAMIC	0.0047μF		500V
C7818	1-126-935-11	ELECT	470μF	20%	6.3V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION
CN7801	* 1-564-509-11	PLUG, CONNECTOR 6P
CN7802	* 1-564-507-11	PLUG, CONNECTOR 4P
CN7803	* 1-564-506-11	PLUG, CONNECTOR 3P
CN7804	* 1-580-844-11	PIN, CONNECTOR (POWER)
CN7805	* 1-564-506-11	PLUG, CONNECTOR 3P

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D7801	8-719-921-86	DIODE MTZJ-13
D7802	8-719-921-86	DIODE MTZJ-13
D7803	8-719-988-61	DIODE 1SS355TE-17

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION
DY7801	⚠ 1-451-476-21	DEFLECTION YOKE (B)

<COIL>

REF.NO.	PART NO.	DESCRIPTION	
L7801	1-412-911-11	FERRITE	0μH
L7802	1-414-187-11	INDUCTOR	47μH

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION
Q7801	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q7802	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q7803	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA
Q7804	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R
Q7805	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q7806	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R
Q7807	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q7808	8-729-045-04	TRANSISTOR 2SC5511
Q7809	8-729-045-05	TRANSISTOR 2SA2005
Q7810	8-729-120-28	TRANSISTOR 2SC1623-L5L6

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
R7801	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R7802	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R7803	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R7804	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R7805	1-216-033-00	RES-CHIP	220	5%	1/10W
R7806	1-216-033-00	RES-CHIP	220	5%	1/10W
R7807	1-216-475-11	METAL OXIDE	120	5%	3W
R7808	1-216-001-00	RES-CHIP	10	5%	1/10W
R7809	1-216-001-00	RES-CHIP	10	5%	1/10W
R7810	1-249-385-11	CARBON	2.2	5%	1/4W
R7811	1-216-475-11	METAL OXIDE	120	5%	3W
R7812	1-216-073-00	RES-CHIP	10K	5%	1/10W
R7813	1-249-414-11	CARBON	560	5%	1/4W
R7814	1-216-009-91	RES-CHIP	22	5%	1/10W
R7815	1-216-009-91	RES-CHIP	22	5%	1/10W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

ZB **CR**

REF.NO.	PART NO.	DESCRIPTION			REMARK
R7816	1-249-414-11	CARBON	560	5%	1/4W
R7817	1-249-415-11	CARBON	680	5%	1/4W
R7818	1-249-433-11	CARBON	22K	5%	1/4W
R7819	1-249-433-11	CARBON	22K	5%	1/4W
R7820	1-249-415-11	CARBON	680	5%	1/4W
R7821	1-249-417-11	CARBON	1K	5%	1/4W
R7822	1-216-049-91	RES-CHIP	1K	5%	1/10W
R7823	1-216-049-91	RES-CHIP	1K	5%	1/10W
R7824	1-249-405-11	CARBON	100	5%	1/4W
R7825	1-249-385-11	CARBON	2.2	5%	1/4W
R7826	1-249-385-11	CARBON	2.2	5%	1/4W
R7827	1-249-405-11	CARBON	100	5%	1/4W
R7828	1-215-913-11	METAL OXIDE	220	5%	3W
R7831	1-216-049-91	RES-CHIP	1K	5%	1/10W
R7832	1-216-025-91	RES-CHIP	100	5%	1/10W
R7833	1-216-009-91	RES-CHIP	22	5%	1/10W
R7834	1-216-295-91	SHORT	0		

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*	A-1332-037-A	CR BOARD, COMPLETE			
		******************************			
	4-382-854-01	SCREW (M3X8), P, SW (+) (IC7101)			
		<CAPACITOR>			
C7102	1-162-115-00	CERAMIC	330pF	10%	2KV
C7103	1-107-652-11	ELECT	10µF	20%	250V
C7104	1-126-768-11	ELECT	2200µF	20%	16V
C7105	1-162-115-00	CERAMIC	330pF	10%	2KV
C7106	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C7107	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C7108	1-126-967-11	ELECT	47µF	20%	50V
C7110	1-102-050-00	CERAMIC	0.01µF	99%	500V
C7111	1-161-830-00	CERAMIC	0.0047µF		500V
C7112	1-163-224-11	CERAMIC CHIP	7pF	0.25pF	50V
C7116	1-107-957-11	ELECT	1µF	20%	250V
C7118	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
		<CONNECTOR>			
CN7101	* 1-564-512-11	PLUG, CONNECTOR 9P			
CN7102	* 1-564-510-11	PLUG, CONNECTOR 7P			
CN7103	* 1-564-512-11	PLUG, CONNECTOR 9P			
CN7104	1-785-879-11	CONNECTOR, ONE TOUCH			
CN7107	1-695-915-11	TAB (CONTACT)			
		<DIODE>			
D7102	8-719-921-86	DIODE MTZJ-13			
D7103	8-719-901-83	DIODE 1SS83			
D7104	8-719-901-83	DIODE 1SS83			
D7105	8-719-901-83	DIODE 1SS83			
D7106	8-719-901-83	DIODE 1SS83			
D7108	8-719-988-61	DIODE 1SS355TE-17			
D7109	8-719-921-86	DIODE MTZJ-13			
D7110	8-719-921-86	DIODE MTZJ-13			

REF.NO.	PART NO.	DESCRIPTION			REMARK
		<IC>			
IC7101	8-759-360-83	IC TDA6111Q/N4			
		<JACK>			
J7101	⚠1-251-182-41	SOCKET, PICTURE TUBE			
		<COIL>			
L7102	1-414-223-11	INDUCTOR	470µH		
L7103	1-414-181-11	INDUCTOR	4.7µH		
L7104	1-414-187-11	INDUCTOR	47µH		
		<NEON LAMP>			
NL7101	1-576-354-21	GAP, SPARK			
NL7102	1-517-729-31	GAP, SPARK			
NL7103	1-576-354-21	GAP, SPARK			
NL7104	1-576-354-21	GAP, SPARK			
NL7105	1-576-354-21	GAP, SPARK			
		<TRANSISTOR>			
Q7101	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
Q7103	8-729-255-12	TRANSISTOR 2SC2551-O			
Q7104	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
		<RESISTOR>			
R7101	1-260-132-11	CARBON	560K	5%	1/2W
R7102	1-249-389-11	CARBON	4.7	5%	1/4W
R7103	1-216-295-91	SHORT	0		
R7105	1-260-117-11	CARBON	33K	5%	1/2W
R7106	1-219-743-11	CARBON	100	5%	1/2W
R7107	1-208-801-11	METAL CHIP	6.2K	0.5%	1/10W
R7108	1-260-133-11	CARBON	680K	5%	1/2W
R7109	1-208-808-11	METAL CHIP	12K	0.5%	1/10W
R7110	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R7111	1-216-033-00	RES-CHIP	220	5%	1/10W
R7112	1-249-424-11	CARBON	3.9K	5%	1/4W
R7113	1-216-295-91	SHORT	0		
R7114	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R7115	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R7116	1-215-929-11	METAL OXIDE	100K	5%	3W
R7117	1-260-093-11	CARBON	330	5%	1/2W
R7118	1-260-087-11	CARBON	100	5%	1/2W
R7119	1-260-099-11	CARBON	1K	5%	1/2W
R7120	1-216-081-00	RES-CHIP	22K	5%	1/10W
R7122	1-216-025-91	RES-CHIP	100	5%	1/10W
R7123	1-216-295-91	SHORT	0		
R7124	1-216-073-00	RES-CHIP	10K	5%	1/10W
R7128	1-208-818-11	METAL CHIP	33K	0.5%	1/10W
R7129	1-249-417-11	CARBON	1K	5%	1/4W
R7130	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R7131	1-216-049-91	RES-CHIP	1K	5%	1/10W
R7132	1-216-295-91	SHORT	0		

REF.NO.	PART NO.	DESCRIPTION	REMARK
R7133	1-208-834-11	METAL CHIP 150K 0.5% 1/10W	
R7134	1-216-049-91	RES-CHIP 1K 5% 1/10W	
R7135	1-216-053-00	RES-CHIP 1.5K 5% 1/10W	
	<SPARK GAP>		
SG7101	1-519-422-11	GAP, SPARK	
SG7103	1-519-422-11	GAP, SPARK	
	<TEST PIN>		
TP7102	* 1-535-881-21	TERMINAL, TP (AUTO INSERTION)	
TP7105	* 1-535-881-21	TERMINAL, TP (AUTO INSERTION)	

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* A-1332-038-A CG BOARD, COMPLETE
****

REF.NO.	PART NO.	DESCRIPTION	REMARK
	4-382-854-01	SCREW (M3X8), P, SW (+) (IC7201)	
	<CAPACITOR>		
C7202	1-162-115-00	CERAMIC 330pF 10% 2KV	
C7203	1-126-768-11	ELECT 2200μF 20% 16V	
C7204	1-107-652-11	ELECT 10μF 20% 250V	
C7205	1-163-038-91	CERAMIC CHIP 0.1μF 25V	
C7206	1-163-038-91	CERAMIC CHIP 0.1μF 25V	
C7207	1-162-115-00	CERAMIC 330pF 10% 2KV	
C7208	1-126-967-11	ELECT 47μF 20% 50V	
C7209	1-102-050-00	CERAMIC 0.01μF 99% 500V	
C7211	1-161-830-00	CERAMIC 0.0047μF 500V	
C7212	1-163-091-00	CERAMIC CHIP 8pF 0.25pF 50V	
C7213	1-163-085-00	CERAMIC CHIP 2pF 0.25pF 50V	
C7214	1-126-964-11	ELECT 10μF 20% 50V	
C7216	1-107-957-11	ELECT 1μF 20% 250V	
	<CONNECTOR>		
CN7201	* 1-564-510-11	PLUG, CONNECTOR 7P	
CN7202	* 1-564-509-11	PLUG, CONNECTOR 6P	
CN7203	* 1-564-512-11	PLUG, CONNECTOR 9P	
CN7204	* 1-564-512-11	PLUG, CONNECTOR 9P	
CN7205	1-785-879-11	CONNECTOR, ONE TOUCH	
CN7208	1-695-915-11	TAB (CONTACT)	
	<DIODE>		
D7202	8-719-921-86	DIODE MTZJ-13	
D7203	8-719-901-83	DIODE 1SS83	
D7204	8-719-901-83	DIODE 1SS83	
D7205	8-719-901-83	DIODE 1SS83	
D7206	8-719-901-83	DIODE 1SS83	
D7208	8-719-988-61	DIODE 1SS355TE-17	
	<IC>		
IC7201	8-759-360-83	IC TDA6111Q/N4	

REF.NO.	PART NO.	DESCRIPTION	REMARK
	<JACK>		
J7201	⚠1-251-182-41	SOCKET, PICTURE TUBE	
	<COIL>		
L7201	1-414-223-11	INDUCTOR 470μH	
L7203	1-414-181-11	INDUCTOR 4.7μH	
L7204	1-414-187-11	INDUCTOR 47μH	
	<NEON LAMP>		
NL7201	1-576-354-21	GAP, SPARK	
NL7202	1-576-354-21	GAP, SPARK	
NL7203	1-517-729-31	GAP, SPARK	
NL7204	1-576-354-21	GAP, SPARK	
NL7205	1-576-354-21	GAP, SPARK	
	<TRANSISTOR>		
Q7201	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q7202	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q7203	8-729-255-12	TRANSISTOR 2SC2551-O	
	<RESISTOR>		
R7201	1-260-132-11	CARBON 560K 5% 1/2W	
R7202	1-216-295-91	SHORT 0	
R7203	1-208-846-11	METAL CHIP 470K 0.5% 1/10W	
R7204	1-219-743-11	CARBON 100 5% 1/2W	
R7205	1-260-117-11	CARBON 33K 5% 1/2W	
R7206	1-208-801-11	METAL CHIP 6.2K 0.5% 1/10W	
R7207	1-208-808-11	METAL CHIP 12K 0.5% 1/10W	
R7208	1-216-033-00	RES-CHIP 220 5% 1/10W	
R7209	1-260-133-11	CARBON 680K 5% 1/2W	
R7210	1-208-790-11	METAL CHIP 2.2K 0.5% 1/10W	
R7211	1-249-424-11	CARBON 3.9K 5% 1/4W	
R7212	1-208-789-11	METAL CHIP 2K 0.5% 1/10W	
R7213	1-215-929-11	METAL OXIDE 100K 5% 3W	
R7214	1-216-295-91	SHORT 0	
R7215	1-208-782-11	METAL CHIP 1K 0.5% 1/10W	
R7216	1-260-093-11	CARBON 330 5% 1/2W	
R7217	1-216-295-91	SHORT 0	
R7218	1-260-099-11	CARBON 1K 5% 1/2W	
R7219	1-216-295-91	SHORT 0	
R7220	1-216-025-91	RES-CHIP 100 5% 1/10W	
R7222	1-216-295-91	SHORT 0	
R7223	1-208-802-11	METAL CHIP 6.8K 0.5% 1/10W	
R7224	1-208-799-11	METAL CHIP 5.1K 0.5% 1/10W	
R7225	1-216-081-00	RES-CHIP 22K 5% 1/10W	
R7229	1-249-417-11	CARBON 1K 5% 1/4W	
R7235	1-216-053-00	RES-CHIP 1.5K 5% 1/10W	
	<SPARK GAP>		
SG7201	1-519-422-11	GAP, SPARK	
SG7203	1-519-422-11	GAP, SPARK	

CG **CB**

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

<TEST PIN>

REF.NO.	PART NO.	DESCRIPTION	REMARK
TP7202	* 1-535-881-21	TERMINAL, TP (AUTO INSERTION)	
TP7205	* 1-535-881-21	TERMINAL, TP (AUTO INSERTION)	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
	* A-1332-039-A	CB BOARD, COMPLETE	
		******************************	
	4-382-854-01	SCREW (M3X8), P, SW (+) (IC7301)	

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C7302	1-162-115-00	CERAMIC	330pF	10%	2KV	
C7303	1-162-115-00	CERAMIC	330pF	10%	2KV	
C7304	1-126-768-11	ELECT	2200μF	20%	16V	
C7305	1-163-038-91	CERAMIC CHIP	0.1μF		25V	
C7306	1-163-038-91	CERAMIC CHIP	0.1μF		25V	
C7307	1-107-652-11	ELECT	10μF	20%	250V	
C7308	1-126-967-11	ELECT	47μF	20%	50V	
C7309	1-163-085-00	CERAMIC CHIP	2pF	0.25pF	50V	
C7311	1-102-050-00	CERAMIC	0.01μF	99%	500V	
C7312	1-161-830-00	CERAMIC	0.0047μF		500V	
C7313	1-163-091-00	CERAMIC CHIP	8pF	0.25pF	50V	
C7314	1-126-964-11	ELECT	10μF	20%	50V	
C7315	1-126-960-11	ELECT	1μF	20%	50V	
C7318	1-107-957-11	ELECT	1μF	20%	250V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN7301	* 1-564-509-11	PLUG, CONNECTOR 6P	
CN7302	* 1-564-512-11	PLUG, CONNECTOR 9P	
CN7303	* 1-564-512-11	PLUG, CONNECTOR 9P	
CN7304	1-785-879-11	CONNECTOR, ONE TOUCH	
CN7307	1-695-915-11	TAB (CONTACT)	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D7302	8-719-921-86	DIODE MTZJ-13	
D7303	8-719-901-83	DIODE 1SS83	
D7304	8-719-901-83	DIODE 1SS83	
D7305	8-719-901-83	DIODE 1SS83	
D7306	8-719-901-83	DIODE 1SS83	
D7307	8-719-988-61	DIODE 1SS355TE-17	
D7308	8-719-921-88	DIODE MTZJ-13B	
D7309	8-719-988-61	DIODE 1SS355TE-17	
D7311	8-719-921-86	DIODE MTZJ-13	
D7312	8-719-921-86	DIODE MTZJ-13	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC7301	8-759-360-83	IC TDA6111Q/N4	

<JACK>

REF.NO.	PART NO.	DESCRIPTION	REMARK
J7301	⚠1-251-182-41	SOCKET, PICTURE TUBE	

<COIL>

REF.NO.	PART NO.	DESCRIPTION		REMARK
L7301	1-414-223-11	INDUCTOR	470μH	
L7303	1-414-181-11	INDUCTOR	4.7μH	
L7304	1-414-187-11	INDUCTOR	47μH	

<NEON LAMP>

REF.NO.	PART NO.	DESCRIPTION	REMARK
NL7301	1-576-354-21	GAP, SPARK	
NL7302	1-517-729-31	GAP, SPARK	
NL7303	1-576-354-21	GAP, SPARK	
NL7304	1-576-354-21	GAP, SPARK	
NL7305	1-576-354-21	GAP, SPARK	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q7301	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q7302	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q7303	8-729-255-12	TRANSISTOR 2SC2551-O	
Q7305	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q7306	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R7301	1-219-743-11	CARBON	100	5%	1/2W	
R7302	1-260-132-11	CARBON	560K	5%	1/2W	
R7304	1-216-295-91	SHORT	0			
R7306	1-260-099-11	CARBON	1K	5%	1/2W	
R7307	1-208-801-11	METAL CHIP	6.2K	0.5%	1/10W	
R7308	1-260-133-11	CARBON	680K	5%	1/2W	
R7309	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W	
R7310	1-216-295-91	SHORT	0			
R7311	1-208-808-11	METAL CHIP	12K	0.5%	1/10W	
R7312	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W	
R7313	1-216-033-00	RES-CHIP	220	5%	1/10W	
R7314	1-249-424-11	CARBON	3.9K	5%	1/4W	
R7315	1-216-295-91	SHORT	0			
R7316	1-215-929-11	METAL OXIDE	100K	5%	3W	
R7317	1-260-093-11	CARBON	330	5%	1/2W	
R7318	1-216-295-91	SHORT	0			
R7319	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W	
R7320	1-260-087-11	CARBON	100	5%	1/2W	
R7321	1-260-117-11	CARBON	33K	5%	1/2W	
R7322	1-208-782-11	METAL CHIP	1K	0.5%	1/10W	
R7323	1-216-025-91	RES-CHIP	100	5%	1/10W	
R7324	1-216-295-91	SHORT	0			
R7326	1-208-803-11	METAL CHIP	7.5K	0.5%	1/10W	
R7327	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W	
R7328	1-216-073-00	RES-CHIP	10K	5%	1/10W	
R7329	1-216-091-00	RES-CHIP	56K	5%	1/10W	
R7330	1-216-081-00	RES-CHIP	22K	5%	1/10W	
R7331	1-216-055-00	RES-CHIP	1.8K	5%	1/10W	
R7332	1-216-081-00	RES-CHIP	22K	5%	1/10W	
R7335	1-249-417-11	CARBON	1K	5%	1/4W	
R7336	1-216-053-00	RES-CHIP	1.5K	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
	<SPARK GAP>		
SG7301	1-519-422-11	GAP, SPARK	
SG7303	1-519-422-11	GAP, SPARK	
	<TEST PIN>		
TP7302	* 1-535-881-21	TERMINAL, TP (AUTO INSERTION)	
TP7304	* 1-535-881-21	TERMINAL, TP (AUTO INSERTION)	

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* A-1136-087-A B3 BOARD, COMPLETE

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<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C302	1-117-136-11	ELECT CHIP	10μF	20%	6.3V
C305	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C306	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C309	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C310	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C312	1-163-275-11	CERAMIC CHIP	0.001μF	5%	50V
C313	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C314	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C315	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C316	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C317	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C318	1-124-779-00	ELECT CHIP	10μF	20%	16V
C319	1-126-394-11	ELECT CHIP	10μF	20%	16V
C320	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C321	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C323	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C324	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C325	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C327	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C330	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C331	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C332	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C333	1-216-295-91	SHORT	0		
C337	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C338	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C339	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C340	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C341	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C346	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C347	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C349	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C350	1-126-396-11	ELECT CHIP	47μF	20%	16V
C353	1-126-204-11	ELECT CHIP	47μF	20%	16V
C354	1-117-136-11	ELECT CHIP	10μF	20%	6.3V
C355	1-117-136-11	ELECT CHIP	10μF	20%	6.3V
C361	1-124-779-00	ELECT CHIP	10μF	20%	16V
C362	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C363	1-163-017-00	CERAMIC CHIP	0.0047μF	10%	50V
C501	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C502	1-124-779-00	ELECT CHIP	10μF	20%	16V
C503	1-124-779-00	ELECT CHIP	10μF	20%	16V
C505	1-124-779-00	ELECT CHIP	10μF	20%	16V
C507	1-124-779-00	ELECT CHIP	10μF	20%	16V
C509	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C510	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C511	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C512	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C514	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C515	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C516	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C517	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C518	1-126-204-11	ELECT CHIP	47μF	20%	16V
C519	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C520	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C521	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C522	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C523	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C524	1-124-779-00	ELECT CHIP	10μF	20%	16V
C525	1-126-394-11	ELECT CHIP	10μF	20%	16V
C526	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C527	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C528	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C530	1-216-295-91	SHORT	0		
C532	1-216-295-91	SHORT	0		
C534	1-216-295-91	SHORT	0		
C538	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C539	1-126-204-11	ELECT CHIP	47μF	20%	16V
C540	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C542	1-126-204-11	ELECT CHIP	47μF	20%	16V
C543	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C545	1-126-396-11	ELECT CHIP	47μF	20%	16V
C546	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C548	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C549	1-126-204-11	ELECT CHIP	47μF	20%	16V
C550	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C551	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C554	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C555	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C556	1-126-392-11	ELECT CHIP	100μF	20%	6.3V
C557	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C559	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C560	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C601	1-126-394-11	ELECT CHIP	10μF	20%	16V
C602	1-126-394-11	ELECT CHIP	10μF	20%	16V
C603	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C604	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C605	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C606	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C607	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C608	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C609	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C610	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C611	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C612	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C613	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C614	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C615	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V

B3

REF.NO.	PART NO.	DESCRIPTION			REMARK
C616	1-126-396-11	ELECT CHIP	47μF	20%	16V
C617	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C618	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C619	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C620	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C621	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C622	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C623	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C624	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C625	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C626	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C627	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C628	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C629	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C630	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C631	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C632	1-126-206-11	ELECT CHIP	100μF	20%	6.3V
C633	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C634	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C635	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C636	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C637	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C638	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C639	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C640	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C642	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C643	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C644	1-126-398-11	ELECT CHIP	4.7μF	20%	35V
C645	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C801	1-124-779-00	ELECT CHIP	10μF	20%	16V
C802	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C803	1-124-779-00	ELECT CHIP	10μF	20%	16V
C804	1-124-779-00	ELECT CHIP	10μF	20%	16V
C806	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C807	1-124-779-00	ELECT CHIP	10μF	20%	16V
C808	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C809	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C810	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C811	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C812	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C813	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C814	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C815	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C816	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C817	1-163-229-11	CERAMIC CHIP	12pF	5%	50V
C818	1-163-229-11	CERAMIC CHIP	12pF	5%	50V
C819	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C820	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C821	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C822	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C823	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C824	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C825	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C827	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C829	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C834	1-163-038-91	CERAMIC CHIP	0.1μF		25V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C835	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C837	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C839	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C840	1-126-206-11	ELECT CHIP	100μF	20%	6.3V
C841	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C842	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C843	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C844	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C848	1-163-017-00	CERAMIC CHIP	0.0047μF	10%	50V
C849	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C850	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C851	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C852	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C853	1-164-182-11	CERAMIC CHIP	0.0033μF	10%	50V
C854	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C901	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C902	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C903	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C904	1-124-779-00	ELECT CHIP	10μF	20%	16V
C905	1-109-982-11	CERAMIC CHIP	1μF	10%	10V
C906	1-124-779-00	ELECT CHIP	10μF	20%	16V
C907	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C908	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C909	1-126-396-11	ELECT CHIP	47μF	20%	16V
C910	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V
C913	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C914	1-126-394-11	ELECT CHIP	10μF	20%	16V
C950	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C954	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
		<CONNECTOR>			
CN502	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P			
		<DIODE>			
D301	8-719-041-97	DIODE MA113-(TX)			
D302	8-719-041-97	DIODE MA113-(TX)			
D501	8-719-422-12	DIODE MA8039			
D601	8-719-073-01	DIODE MA111-(K8).S0			
		<FERRITBEAD>			
FB501	1-414-813-11	FERRITE	0μH		
FB502	1-414-813-11	FERRITE	0μH		
FB503	1-414-813-11	FERRITE	0μH		
FB504	1-414-813-11	FERRITE	0μH		
FB601	1-414-553-11	FERRITE	0μH		
FB801	1-414-553-11	FERRITE	0μH		
FB802	1-414-553-11	FERRITE	0μH		
		<FILTER>			
FL304	1-234-177-21	FILTER, CHIP EMI			
FL305	1-234-177-21	FILTER, CHIP EMI			
FL306	1-239-558-11	FILTER, CHIP EMI			

REF.NO.	PART NO.	DESCRIPTION	REMARK
FL501	1-233-877-11	FILTER, LOW PASS	
FL502	1-233-504-21	FILTER, LOW PASS	
FL503	1-233-504-21	FILTER, LOW PASS	
FL504	1-234-177-21	FILTER, CHIP EMI	
FL505	1-234-177-21	FILTER, CHIP EMI	
FL506	1-234-177-21	FILTER, CHIP EMI	
FL508	1-234-177-21	FILTER, CHIP EMI	
FL509	1-234-177-21	FILTER, CHIP EMI	
FL510	1-234-177-21	FILTER, CHIP EMI	
FL511	1-234-177-21	FILTER, CHIP EMI	
FL512	1-234-177-21	FILTER, CHIP EMI	
FL601	1-234-177-21	FILTER, CHIP EMI	
FL602	1-234-177-21	FILTER, CHIP EMI	
FL603	1-234-177-21	FILTER, CHIP EMI	
FL606	1-239-560-11	FILTER, CHIP EMI	
FL801	1-234-177-21	FILTER, CHIP EMI	
FL802	1-234-177-21	FILTER, CHIP EMI	
FL803	1-234-177-21	FILTER, CHIP EMI	
FL804	1-234-177-21	FILTER, CHIP EMI	
FL805	1-234-177-21	FILTER, CHIP EMI	
FL806	1-234-177-21	FILTER, CHIP EMI	
FL807	1-234-177-21	FILTER, CHIP EMI	
FL808	1-234-177-21	FILTER, CHIP EMI	
FL810	1-234-177-21	FILTER, CHIP EMI	
FL901	1-234-509-21	FILTER, LOW PASS	
FL902	1-233-876-11	FILTER, LOW PASS	
FL903	1-233-876-11	FILTER, LOW PASS	
FL904	1-234-177-21	FILTER, CHIP EMI	
FL905	1-234-177-21	FILTER, CHIP EMI	
FL906	1-234-177-21	FILTER, CHIP EMI	
FL907	1-234-177-21	FILTER, CHIP EMI	
	<IC>		
IC302	8-752-388-98	IC CXD2303AQ	
IC303	8-752-088-27	IC CXA3266Q-T6	
IC309	8-759-640-16	IC TC7SET04F(TE85R)	
IC311	8-759-708-05	IC NJM78L05A	
IC501	8-759-447-90	IC TLC5733AIPM	
IC504	8-759-669-78	IC TLC2933IPWR-12	
IC505	8-759-640-16	IC TC7SET04F(TE85R)	
IC506	8-759-640-16	IC TC7SET04F(TE85R)	
IC601	8-752-398-47	IC CXD2090Q	
IC602	8-759-665-38	IC MB81F161622C-80FN	
IC603	8-759-669-75	IC TLC2932IPWR	
IC604	8-752-072-94	IC CXA1875AM-T4	
IC801	8-759-672-57	IC CXD9509AQ	
IC802	8-759-595-53	IC MB81F643242B-10FN	
IC803	8-759-460-29	IC PST9120NL	
IC901	8-752-369-84	IC CXD2309Q-T6	
IC902	8-759-683-19	IC MB94918RPF-G124-BND	
IC903	8-759-575-71	IC M24C04-WMN6T	
IC904	8-759-349-11	IC PST9145NL	

REF.NO.	PART NO.	DESCRIPTION	REMARK
	<COIL>		
L302	1-412-029-11	INDUCTOR CHIP 10µH	
L303	1-412-029-11	INDUCTOR CHIP 10µH	
L501	1-412-026-11	INDUCTOR CHIP 1µH	
L502	1-412-026-11	INDUCTOR CHIP 1µH	
L503	1-412-026-11	INDUCTOR CHIP 1µH	
L504	1-412-026-11	INDUCTOR CHIP 1µH	
L505	1-412-029-11	INDUCTOR CHIP 10µH	
L506	1-412-026-11	INDUCTOR CHIP 1µH	
L508	1-412-029-11	INDUCTOR CHIP 10µH	
L509	1-412-029-11	INDUCTOR CHIP 10µH	
L511	1-412-026-11	INDUCTOR CHIP 1µH	
L512	1-412-026-11	INDUCTOR CHIP 1µH	
L604	1-412-029-11	INDUCTOR CHIP 10µH	
L605	1-412-029-11	INDUCTOR CHIP 10µH	
	<TRANSISTOR>		
Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q302	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q303	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q501	8-729-216-22	TRANSISTOR 2SA1162-G	
Q502	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q503	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q510	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q511	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q512	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q516	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q517	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q518	8-729-216-22	TRANSISTOR 2SA1162-G	
Q519	1-801-806-11	TRANSISTOR DTC144EKA	
Q520	1-801-806-11	TRANSISTOR DTC144EKA	
Q521	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q522	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q523	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q524	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q601	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q602	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q901	8-729-216-22	TRANSISTOR 2SA1162-G	
Q902	8-729-216-22	TRANSISTOR 2SA1162-G	
Q903	8-729-216-22	TRANSISTOR 2SA1162-G	
Q904	8-729-028-28	TRANSISTOR 2SK2036(TE85L)	
Q905	8-729-028-28	TRANSISTOR 2SK2036(TE85L)	
Q906	1-801-806-11	TRANSISTOR DTC144EKA	
Q907	8-729-216-22	TRANSISTOR 2SA1162-G	
Q908	8-729-216-22	TRANSISTOR 2SA1162-G	
Q909	8-729-216-22	TRANSISTOR 2SA1162-G	
	<RESISTOR>		
R302	1-216-013-00	RES-CHIP 33 5% 1/10W	
R303	1-208-798-11	METAL CHIP 4.7K 0.5% 1/10W	
R305	1-216-049-91	RES-CHIP 1K 5% 1/10W	
R306	1-208-789-11	METAL CHIP 2K 0.5% 1/10W	
R309	1-216-009-91	RES-CHIP 22 5% 1/10W	
R310	1-216-009-91	RES-CHIP 22 5% 1/10W	

B3

REF.NO.	PART NO.	DESCRIPTION			REMARK
R311	1-216-009-91	RES-CHIP	22	5%	1/10W
R313	1-216-009-91	RES-CHIP	22	5%	1/10W
R316	1-216-009-91	RES-CHIP	22	5%	1/10W
R318	1-216-009-91	RES-CHIP	22	5%	1/10W
R319	1-216-049-91	RES-CHIP	1K	5%	1/10W
R321	1-216-009-91	RES-CHIP	22	5%	1/10W
R323	1-216-009-91	RES-CHIP	22	5%	1/10W
R324	1-216-009-91	RES-CHIP	22	5%	1/10W
R325	1-216-073-00	RES-CHIP	10K	5%	1/10W
R328	1-216-025-91	RES-CHIP	100	5%	1/10W
R330	1-216-037-00	RES-CHIP	330	5%	1/10W
R331	1-216-033-00	RES-CHIP	220	5%	1/10W
R332	1-216-037-00	RES-CHIP	330	5%	1/10W
R333	1-216-295-91	SHORT	0		
R335	1-216-013-00	RES-CHIP	33	5%	1/10W
R336	1-216-013-00	RES-CHIP	33	5%	1/10W
R337	1-216-097-91	RES-CHIP	100K	5%	1/10W
R338	1-216-295-91	SHORT	0		
R339	1-216-295-91	SHORT	0		
R347	1-216-295-91	SHORT	0		
R350	1-216-295-91	SHORT	0		
R501	1-216-025-91	RES-CHIP	100	5%	1/10W
R502	1-216-025-91	RES-CHIP	100	5%	1/10W
R503	1-216-295-91	SHORT	0		
R504	1-216-295-91	SHORT	0		
R505	1-216-295-91	SHORT	0		
R506	1-216-009-91	RES-CHIP	22	5%	1/10W
R507	1-216-009-91	RES-CHIP	22	5%	1/10W
R508	1-216-025-91	RES-CHIP	100	5%	1/10W
R509	1-216-025-91	RES-CHIP	100	5%	1/10W
R510	1-216-043-91	RES-CHIP	560	5%	1/10W
R511	1-216-043-91	RES-CHIP	560	5%	1/10W
R512	1-216-043-91	RES-CHIP	560	5%	1/10W
R513	1-216-043-91	RES-CHIP	560	5%	1/10W
R514	1-216-043-91	RES-CHIP	560	5%	1/10W
R515	1-216-043-91	RES-CHIP	560	5%	1/10W
R516	1-216-049-91	RES-CHIP	1K	5%	1/10W
R517	1-216-049-91	RES-CHIP	1K	5%	1/10W
R518	1-216-295-91	SHORT	0		
R520	1-208-776-11	METAL CHIP	560	0.5%	1/10W
R521	1-216-295-91	SHORT	0		
R523	1-208-776-11	METAL CHIP	560	0.5%	1/10W
R524	1-216-295-91	SHORT	0		
R526	1-208-776-11	METAL CHIP	560	0.5%	1/10W
R528	1-216-037-00	RES-CHIP	330	5%	1/10W
R529	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R530	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R531	1-216-031-00	RES-CHIP	180	5%	1/10W
R532	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R533	1-216-031-00	RES-CHIP	180	5%	1/10W
R536	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R537	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R540	1-216-049-91	RES-CHIP	1K	5%	1/10W
R548	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R549	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R550	1-208-756-11	METAL CHIP	82	0.5%	1/10W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R551	1-208-756-11	METAL CHIP	82	0.5%	1/10W
R552	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R553	1-216-295-91	SHORT	0		
R554	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R555	1-216-077-91	RES-CHIP	15K	5%	1/10W
R557	1-216-049-91	RES-CHIP	1K	5%	1/10W
R558	1-216-025-91	RES-CHIP	100	5%	1/10W
R559	1-216-077-91	RES-CHIP	15K	5%	1/10W
R560	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R561	1-216-043-91	RES-CHIP	560	5%	1/10W
R562	1-216-043-91	RES-CHIP	560	5%	1/10W
R563	1-216-043-91	RES-CHIP	560	5%	1/10W
R571	1-216-295-91	SHORT	0		
R572	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R573	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R574	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R575	1-208-756-11	METAL CHIP	82	0.5%	1/10W
R576	1-208-756-11	METAL CHIP	82	0.5%	1/10W
R577	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R578	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R579	1-216-077-91	RES-CHIP	15K	5%	1/10W
R580	1-216-295-91	SHORT	0		
R582	1-216-041-00	RES-CHIP	470	5%	1/10W
R584	1-216-041-00	RES-CHIP	470	5%	1/10W
R594	1-216-041-00	RES-CHIP	470	5%	1/10W
R596	1-216-049-91	RES-CHIP	1K	5%	1/10W
R597	1-216-073-00	RES-CHIP	10K	5%	1/10W
R598	1-216-025-91	RES-CHIP	100	5%	1/10W
R600	1-216-066-00	RES-CHIP	5.1K	5%	1/10W
R601	1-216-073-00	RES-CHIP	10K	5%	1/10W
R602	1-216-073-00	RES-CHIP	10K	5%	1/10W
R603	1-216-073-00	RES-CHIP	10K	5%	1/10W
R604	1-216-033-00	RES-CHIP	220	5%	1/10W
R605	1-216-295-91	SHORT	0		
R608	1-216-295-91	SHORT	0		
R609	1-216-073-00	RES-CHIP	10K	5%	1/10W
R610	1-216-033-00	RES-CHIP	220	5%	1/10W
R611	1-216-073-00	RES-CHIP	10K	5%	1/10W
R612	1-216-073-00	RES-CHIP	10K	5%	1/10W
R613	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R615	1-216-089-91	RES-CHIP	47K	5%	1/10W
R616	1-216-073-00	RES-CHIP	10K	5%	1/10W
R617	1-216-295-91	SHORT	0		
R619	1-216-073-00	RES-CHIP	10K	5%	1/10W
R621	1-216-295-91	SHORT	0		
R622	1-216-295-91	SHORT	0		
R623	1-216-295-91	SHORT	0		
R624	1-216-295-91	SHORT	0		
R625	1-216-295-91	SHORT	0		
R626	1-216-073-00	RES-CHIP	10K	5%	1/10W
R628	1-216-295-91	SHORT	0		
R629	1-216-073-00	RES-CHIP	10K	5%	1/10W
R631	1-216-295-91	SHORT	0		
R634	1-216-295-91	SHORT	0		
R635	1-216-295-91	SHORT	0		
R638	1-216-295-91	SHORT	0		

REF.NO.	PART NO.	DESCRIPTION			REMARK
R639	1-216-017-91	RES-CHIP	47	5%	1/10W
R640	1-216-009-91	RES-CHIP	22	5%	1/10W
R642	1-216-295-91	SHORT	0		
R643	1-216-295-91	SHORT	0		
R645	1-216-295-91	SHORT	0		
R651	1-216-295-91	SHORT	0		
R653	1-216-025-91	RES-CHIP	100	5%	1/10W
R654	1-216-033-00	RES-CHIP	220	5%	1/10W
R655	1-216-295-91	SHORT	0		
R657	1-216-009-91	RES-CHIP	22	5%	1/10W
R658	1-216-049-91	RES-CHIP	1K	5%	1/10W
R659	1-216-025-91	RES-CHIP	100	5%	1/10W
R660	1-216-025-91	RES-CHIP	100	5%	1/10W
R661	1-216-025-91	RES-CHIP	100	5%	1/10W
R664	1-216-009-91	RES-CHIP	22	5%	1/10W
R665	1-216-035-00	RES-CHIP	270	5%	1/10W
R666	1-216-646-11	METAL CHIP	620	0.5%	1/10W
R667	1-208-794-11	METAL CHIP	3.3K	0.5%	1/10W
R668	1-216-009-91	RES-CHIP	22	5%	1/10W
R670	1-216-295-91	SHORT	0		
R671	1-216-073-00	RES-CHIP	10K	5%	1/10W
R672	1-216-073-00	RES-CHIP	10K	5%	1/10W
R673	1-216-073-00	RES-CHIP	10K	5%	1/10W
R674	1-216-073-00	RES-CHIP	10K	5%	1/10W
R675	1-216-073-00	RES-CHIP	10K	5%	1/10W
R676	1-216-073-00	RES-CHIP	10K	5%	1/10W
R677	1-216-073-00	RES-CHIP	10K	5%	1/10W
R678	1-216-073-00	RES-CHIP	10K	5%	1/10W
R679	1-216-073-00	RES-CHIP	10K	5%	1/10W
R680	1-216-073-00	RES-CHIP	10K	5%	1/10W
R681	1-216-073-00	RES-CHIP	10K	5%	1/10W
R682	1-216-073-00	RES-CHIP	10K	5%	1/10W
R683	1-216-073-00	RES-CHIP	10K	5%	1/10W
R684	1-216-073-00	RES-CHIP	10K	5%	1/10W
R685	1-216-073-00	RES-CHIP	10K	5%	1/10W
R686	1-216-073-00	RES-CHIP	10K	5%	1/10W
R687	1-216-295-91	SHORT	0		
R688	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R689	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R690	1-216-295-91	SHORT	0		
R691	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R692	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R693	1-216-009-91	RES-CHIP	22	5%	1/10W
R694	1-216-295-91	SHORT	0		
R695	1-216-047-91	RES-CHIP	820	5%	1/10W
R696	1-216-049-91	RES-CHIP	1K	5%	1/10W
R697	1-216-117-00	RES-CHIP	680K	5%	1/10W
R698	1-216-117-00	RES-CHIP	680K	5%	1/10W
R699	1-216-295-91	SHORT	0		
R801	1-216-009-91	RES-CHIP	22	5%	1/10W
R802	1-216-009-91	RES-CHIP	22	5%	1/10W
R804	1-216-073-00	RES-CHIP	10K	5%	1/10W
R806	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R807	1-208-768-11	METAL CHIP	270	0.5%	1/10W
R812	1-216-073-00	RES-CHIP	10K	5%	1/10W
R813	1-216-295-91	SHORT	0		
R814	1-216-073-00	RES-CHIP	10K	5%	1/10W
R815	1-216-073-00	RES-CHIP	10K	5%	1/10W
R816	1-216-073-00	RES-CHIP	10K	5%	1/10W
R817	1-211-962-11	METAL CHIP	27	0.5%	1/10W
R819	1-216-295-91	SHORT	0		
R820	1-216-295-91	SHORT	0		
R823	1-216-073-00	RES-CHIP	10K	5%	1/10W
R824	1-216-073-00	RES-CHIP	10K	5%	1/10W
R825	1-208-752-11	METAL CHIP	56	0.5%	1/10W
R826	1-208-772-11	METAL CHIP	390	0.5%	1/10W
R827	1-216-607-11	METAL CHIP	15	0.5%	1/10W
R834	1-208-760-11	METAL CHIP	120	0.5%	1/10W
R835	1-208-754-11	METAL CHIP	68	0.5%	1/10W
R836	1-211-960-11	METAL CHIP	22	0.5%	1/10W
R838	1-216-295-91	SHORT	0		
R840	1-216-295-91	SHORT	0		
R844	1-216-009-91	RES-CHIP	22	5%	1/10W
R845	1-216-009-91	RES-CHIP	22	5%	1/10W
R846	1-216-009-91	RES-CHIP	22	5%	1/10W
R847	1-216-009-91	RES-CHIP	22	5%	1/10W
R848	1-216-009-91	RES-CHIP	22	5%	1/10W
R849	1-216-009-91	RES-CHIP	22	5%	1/10W
R850	1-216-009-91	RES-CHIP	22	5%	1/10W
R851	1-216-009-91	RES-CHIP	22	5%	1/10W
R852	1-216-009-91	RES-CHIP	22	5%	1/10W
R853	1-216-009-91	RES-CHIP	22	5%	1/10W
R854	1-216-009-91	RES-CHIP	22	5%	1/10W
R855	1-216-009-91	RES-CHIP	22	5%	1/10W
R856	1-216-009-91	RES-CHIP	22	5%	1/10W
R857	1-216-009-91	RES-CHIP	22	5%	1/10W
R858	1-216-009-91	RES-CHIP	22	5%	1/10W
R859	1-216-009-91	RES-CHIP	22	5%	1/10W
R860	1-216-009-91	RES-CHIP	22	5%	1/10W
R861	1-216-009-91	RES-CHIP	22	5%	1/10W
R862	1-216-009-91	RES-CHIP	22	5%	1/10W
R863	1-216-009-91	RES-CHIP	22	5%	1/10W
R864	1-216-009-91	RES-CHIP	22	5%	1/10W
R865	1-216-009-91	RES-CHIP	22	5%	1/10W
R866	1-216-009-91	RES-CHIP	22	5%	1/10W
R867	1-216-009-91	RES-CHIP	22	5%	1/10W
R868	1-216-009-91	RES-CHIP	22	5%	1/10W
R869	1-216-009-91	RES-CHIP	22	5%	1/10W
R870	1-216-009-91	RES-CHIP	22	5%	1/10W
R871	1-216-009-91	RES-CHIP	22	5%	1/10W
R872	1-216-009-91	RES-CHIP	22	5%	1/10W
R873	1-216-009-91	RES-CHIP	22	5%	1/10W
R874	1-216-009-91	RES-CHIP	22	5%	1/10W
R875	1-216-009-91	RES-CHIP	22	5%	1/10W
R876	1-216-009-91	RES-CHIP	22	5%	1/10W
R877	1-216-009-91	RES-CHIP	22	5%	1/10W
R878	1-216-009-91	RES-CHIP	22	5%	1/10W
R879	1-216-009-91	RES-CHIP	22	5%	1/10W
R880	1-216-009-91	RES-CHIP	22	5%	1/10W
R881	1-216-009-91	RES-CHIP	22	5%	1/10W
R882	1-216-009-91	RES-CHIP	22	5%	1/10W
R883	1-216-009-91	RES-CHIP	22	5%	1/10W

B3

REF.NO.	PART NO.	DESCRIPTION			REMARK
R884	1-216-009-91	RES-CHIP	22	5%	1/10W
R885	1-216-009-91	RES-CHIP	22	5%	1/10W
R886	1-216-009-91	RES-CHIP	22	5%	1/10W
R887	1-216-009-91	RES-CHIP	22	5%	1/10W
R888	1-216-009-91	RES-CHIP	22	5%	1/10W
R889	1-216-009-91	RES-CHIP	22	5%	1/10W
R890	1-216-009-91	RES-CHIP	22	5%	1/10W
R891	1-216-009-91	RES-CHIP	22	5%	1/10W
R892	1-216-009-91	RES-CHIP	22	5%	1/10W
R893	1-216-009-91	RES-CHIP	22	5%	1/10W
R894	1-216-009-91	RES-CHIP	22	5%	1/10W
R895	1-216-009-91	RES-CHIP	22	5%	1/10W
R896	1-216-009-91	RES-CHIP	22	5%	1/10W
R897	1-216-009-91	RES-CHIP	22	5%	1/10W
R898	1-216-009-91	RES-CHIP	22	5%	1/10W
R899	1-216-073-00	RES-CHIP	10K	5%	1/10W
R901	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R902	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R903	1-208-794-11	METAL CHIP	3.3K	0.5%	1/10W
R904	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R905	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R906	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R907	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R908	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R909	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R910	1-216-049-91	RES-CHIP	1K	5%	1/10W
R911	1-216-049-91	RES-CHIP	1K	5%	1/10W
R912	1-216-049-91	RES-CHIP	1K	5%	1/10W
R914	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R916	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R923	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R926	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R927	1-216-295-91	SHORT	0		
R929	1-216-025-91	RES-CHIP	100	5%	1/10W
R930	1-216-025-91	RES-CHIP	100	5%	1/10W
R931	1-216-041-00	RES-CHIP	470	5%	1/10W
R933	1-216-025-91	RES-CHIP	100	5%	1/10W
R934	1-216-025-91	RES-CHIP	100	5%	1/10W
R935	1-216-073-00	RES-CHIP	10K	5%	1/10W
R936	1-216-041-00	RES-CHIP	470	5%	1/10W
R937	1-216-025-91	RES-CHIP	100	5%	1/10W
R938	1-216-025-91	RES-CHIP	100	5%	1/10W
R939	1-216-295-91	SHORT	0		
R940	1-216-295-91	SHORT	0		
R941	1-216-295-91	SHORT	0		
R942	1-216-037-00	RES-CHIP	330	5%	1/10W
R943	1-216-033-00	RES-CHIP	220	5%	1/10W
R944	1-216-295-91	SHORT	0		
R945	1-216-295-91	SHORT	0		
R951	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R952	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R953	1-216-295-91	SHORT	0		
R954	1-216-295-91	SHORT	0		
R955	1-216-295-91	SHORT	0		
R956	1-216-089-91	RES-CHIP	47K	5%	1/10W
R957	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R958	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R959	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R960	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R961	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R962	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R979	1-216-295-91	SHORT	0		
R981	1-216-037-00	RES-CHIP	330	5%	1/10W
R982	1-216-037-00	RES-CHIP	330	5%	1/10W
R983	1-216-089-91	RES-CHIP	47K	5%	1/10W
R984	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R985	1-216-113-00	RES-CHIP	470K	5%	1/10W
R986	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R987	1-216-049-91	RES-CHIP	1K	5%	1/10W
R988	1-216-033-00	RES-CHIP	220	5%	1/10W
R989	1-216-081-00	RES-CHIP	22K	5%	1/10W
R990	1-216-113-00	RES-CHIP	470K	5%	1/10W
R991	1-216-295-91	SHORT	0		
R993	1-216-089-91	RES-CHIP	47K	5%	1/10W
R994	1-216-033-00	RES-CHIP	220	5%	1/10W
R995	1-216-033-00	RES-CHIP	220	5%	1/10W
R996	1-216-037-00	RES-CHIP	330	5%	1/10W
R997	1-216-037-00	RES-CHIP	330	5%	1/10W
R998	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2801	1-208-760-11	METAL CHIP	120	0.5%	1/10W
R2802	1-208-754-11	METAL CHIP	68	0.5%	1/10W
R2803	1-216-603-11	METAL CHIP	10	0.5%	1/10W
R2804	1-208-758-11	METAL CHIP	100	0.5%	1/10W
R2805	1-208-754-11	METAL CHIP	68	0.5%	1/10W
R2806	1-211-960-11	METAL CHIP	22	0.5%	1/10W
R2809	1-216-295-91	SHORT	0		
R2810	1-216-295-91	SHORT	0		
R2813	1-216-295-91	SHORT	0		
R2815	1-216-295-91	SHORT	0		
R2817	1-216-295-91	SHORT	0		
R2818	1-216-295-91	SHORT	0		
R2820	1-216-295-91	SHORT	0		
R2822	1-216-295-91	SHORT	0		
	<NETWORK RESISTOR>				
RB001	1-239-409-11	NETWORK RESISTOR (CHIP)	47		
RB002	1-239-409-11	NETWORK RESISTOR (CHIP)	47		
RB003	1-239-409-11	NETWORK RESISTOR (CHIP)	47		
RB004	1-239-409-11	NETWORK RESISTOR (CHIP)	47		
RB005	1-239-409-11	NETWORK RESISTOR (CHIP)	47		
RB006	1-239-409-11	NETWORK RESISTOR (CHIP)	47		
RB007	1-239-414-11	NETWORK RESISTOR (CHIP)	150		
RB008	1-239-414-11	NETWORK RESISTOR (CHIP)	150		
RB009	1-239-414-11	NETWORK RESISTOR (CHIP)	150		
RB010	1-239-414-11	NETWORK RESISTOR (CHIP)	150		
RB011	1-239-414-11	NETWORK RESISTOR (CHIP)	150		
RB012	1-239-414-11	NETWORK RESISTOR (CHIP)	150		
RB013	1-239-621-11	NETWORK RESISTOR (CHIP)	22		
RB014	1-239-621-11	NETWORK RESISTOR (CHIP)	22		
RB015	1-239-621-11	NETWORK RESISTOR (CHIP)	22		
RB016	1-239-621-11	NETWORK RESISTOR (CHIP)	22		

REF.NO.	PART NO.	DESCRIPTION	REMARK
RB017	1-239-621-11	NETWORK RESISTOR (CHIP) 22	
RB018	1-239-621-11	NETWORK RESISTOR (CHIP) 22	
RB019	1-239-409-11	NETWORK RESISTOR (CHIP) 47	
RB020	1-239-409-11	NETWORK RESISTOR (CHIP) 47	
RB021	1-239-409-11	NETWORK RESISTOR (CHIP) 47	
RB022	1-239-409-11	NETWORK RESISTOR (CHIP) 47	
RB023	1-239-409-11	NETWORK RESISTOR (CHIP) 47	
RB024	1-239-409-11	NETWORK RESISTOR (CHIP) 47	
RB025	1-239-409-11	NETWORK RESISTOR (CHIP) 47	
RB026	1-239-409-11	NETWORK RESISTOR (CHIP) 47	
RB027	1-239-409-11	NETWORK RESISTOR (CHIP) 47	
RB301	1-239-621-11	NETWORK RESISTOR (CHIP) 22	
RB302	1-239-621-11	NETWORK RESISTOR (CHIP) 22	
RB701	1-239-711-91	NETWORK RESISTOR (CHIP) 0	
RB702	1-239-711-91	NETWORK RESISTOR (CHIP) 0	
RB703	1-239-711-91	NETWORK RESISTOR (CHIP) 0	
RB704	1-239-711-91	NETWORK RESISTOR (CHIP) 0	
RB705	1-239-711-91	NETWORK RESISTOR (CHIP) 0	
RB706	1-239-711-91	NETWORK RESISTOR (CHIP) 0	

<CRYSTAL>

REF.NO.	PART NO.	DESCRIPTION
X801	1-781-649-21	OSCILLATOR, CRYSTAL (54MHz)
X802	1-781-650-21	VIBRATOR, CRYSTAL (17.28MHz)
X901	1-760-014-11	VIBRATOR, CERAMIC (20MHz)

****

* A-1299-176-A A1 BOARD, COMPLETE

****

* 1-555-110-00 CABLE, PIN

4-382-854-11 SCREW (M3X10), P, SW (+)
(IC1601, IC1602, IC1603, IC1604, IC1605)

4-389-026-11 SHEET, BN (IC1604)

<COMFILTER MODULE>

REF.NO.	PART NO.	DESCRIPTION
BC4	1-772-694-11	3D COMFILTER MODULE, DIGITAL

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C1101	1-126-935-11	ELECT	470μF	20%	16V
C1102	1-126-964-11	ELECT	10μF	20%	50V
C1103	1-126-960-11	ELECT	1μF	20%	50V
C1104	1-126-960-11	ELECT	1μF	20%	50V
C1105	1-126-041-11	ELECT	2200μF	20%	35V
C1106	1-136-165-00	MYLAR	0.1μF	5%	50V
C1107	1-136-165-00	MYLAR	0.1μF	5%	50V
C1108	1-104-664-11	ELECT	47μF	20%	16V
C1109	1-104-664-11	ELECT	47μF	20%	16V
C1110	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C1111	1-126-041-11	ELECT	2200μF	20%	35V
C1114	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C1116	1-126-933-11	ELECT	100μF	20%	16V
C1117	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C1201	1-107-725-11	CERAMIC CHIP	0.1μF	10%	16V
C1202	1-126-934-11	ELECT	220μF	20%	16V
C1203	1-126-965-11	ELECT	22μF	20%	50V
C1204	1-115-419-11	CERAMIC CHIP	3300pF	5%	25V
C1205	1-115-419-11	CERAMIC CHIP	3300pF	5%	25V
C1206	1-164-492-11	CERAMIC CHIP	0.15μF	10%	16V
C1208	1-107-725-11	CERAMIC CHIP	0.1μF	10%	16V
C1209	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C1210	1-164-492-11	CERAMIC CHIP	0.15μF	10%	16V
C1211	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C1213	1-107-725-11	CERAMIC CHIP	0.1μF	10%	16V
C1215	1-164-505-11	CERAMIC CHIP	2.2μF		16V
C1217	1-164-505-11	CERAMIC CHIP	2.2μF		16V
C1219	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C1220	1-107-715-11	ELECT	22μF	20%	16V
C1221	1-137-150-11	MYLAR	0.01μF	5%	50V
C1222	1-126-962-11	ELECT	3.3μF	20%	50V
C1223	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C1224	1-126-933-11	ELECT	100μF	20%	16V
C1225	1-126-933-11	ELECT	100μF	20%	16V
C1226	1-126-933-11	ELECT	100μF	20%	16V
C1227	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C1228	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C1229	1-126-767-11	ELECT	1000μF	20%	16V
C1230	1-126-933-11	ELECT	100μF	20%	16V
C1231	1-107-725-11	CERAMIC CHIP	0.1μF	10%	16V
C1310	1-115-339-11	CERAMIC CHIP	0.1μF	10%	50V
C1311	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C1312	1-104-664-11	ELECT	47μF	20%	16V
C1314	1-126-933-11	ELECT	100μF	20%	16V
C1315	1-107-725-11	CERAMIC CHIP	0.1μF	10%	16V
C1316	1-126-933-11	ELECT	100μF	20%	16V
C1317	1-163-005-11	CERAMIC CHIP	470pF	10%	50V
C1321	1-126-933-11	ELECT	100μF	20%	16V
C1323	1-107-725-11	CERAMIC CHIP	0.1μF	10%	16V
C1324	1-163-005-11	CERAMIC CHIP	470pF	10%	50V
C1325	1-126-933-11	ELECT	100μF	20%	16V
C1326	1-126-933-11	ELECT	100μF	20%	16V
C1327	1-104-665-11	ELECT	100μF	20%	25V
C1328	1-126-967-11	ELECT	47μF	20%	50V
C1329	1-163-005-11	CERAMIC CHIP	470pF	10%	50V
C1330	1-163-005-11	CERAMIC CHIP	470pF	10%	50V
C1331	1-163-005-11	CERAMIC CHIP	470pF	10%	50V
C1332	1-126-967-11	ELECT	47μF	20%	50V
C1333	1-104-665-11	ELECT	100μF	20%	25V
C1334	1-126-933-11	ELECT	100μF	20%	16V
C1335	1-163-005-11	CERAMIC CHIP	470pF	10%	50V
C1336	1-163-005-11	CERAMIC CHIP	470pF	10%	50V
C1337	1-163-005-11	CERAMIC CHIP	470pF	10%	50V
C1401	1-164-346-11	CERAMIC CHIP	1μF		16V
C1601	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C1602	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C1603	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C1604	1-126-933-11	ELECT	100μF	20%	16V
C1605	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C1606	1-126-933-11	ELECT	100μF	20%	16V
C1607	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C1608	1-126-933-11	ELECT	100μF	20%	16V
C1610	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V

A1

REF.NO.	PART NO.	DESCRIPTION	REMARK
C1611	1-126-916-11	ELECT 1000µF 20% 6.3V	
C1612	1-126-925-11	ELECT 470µF 20% 10V	
C1615	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
C1616	1-126-916-11	ELECT 1000µF 20% 6.3V	
C1617	1-126-925-11	ELECT 470µF 20% 10V	
C1619	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
		<CONNECTOR>	
CN1001	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P	
CN1102	* 1-564-507-11	PLUG, CONNECTOR 4P	
CN1201	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P	
CN1301	* 1-564-508-11	PLUG, CONNECTOR 5P	
CN1302	* 1-764-333-11	PLUG, CONNECTOR 10P	
CN1404	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P	
CN1501	1-785-802-11	PIN, CONNECTOR (WITH PWB) 20P	
CN1502	1-785-802-11	PIN, CONNECTOR (WITH PWB) 20P	
CN1503	* 1-564-511-11	PLUG, CONNECTOR 8P	
CN1504	* 1-564-508-11	PLUG, CONNECTOR 5P	
CN1603	* 1-764-333-11	PLUG, CONNECTOR 10P	
CN1605	* 1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
CN1606	* 1-564-508-11	PLUG, CONNECTOR 5P	
CN1661	1-695-915-11	TAB (CONTACT)	
CN1665	1-695-915-11	TAB (CONTACT)	
CN1666	1-695-915-11	TAB (CONTACT)	
CN1801	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P	
		<COMPOSITION CIRCUIT BLOCK>	
CP1302	1-251-658-31	SPLITTER RF	
		<DIODE>	
D1101	8-719-988-61	DIODE 1SS355TE-17	
D1102	8-719-988-61	DIODE 1SS355TE-17	
D1103	8-719-988-61	DIODE 1SS355TE-17	
D1104	8-719-988-61	DIODE 1SS355TE-17	
D1105	8-719-914-43	DIODE DAN202K	
D1106	8-719-914-43	DIODE DAN202K	
D1107	8-719-402-92	DIODE MA3220M-TX	
D1108	8-719-988-61	DIODE 1SS355TE-17	
D1109	8-719-988-61	DIODE 1SS355TE-17	
D1110	8-719-402-92	DIODE MA3220M-TX	
D1111	8-719-402-92	DIODE MA3220M-TX	
D1112	8-719-402-92	DIODE MA3220M-TX	
D1201	8-719-988-61	DIODE 1SS355TE-17	
D1202	8-719-914-43	DIODE DAN202K	
D1204	8-719-914-43	DIODE DAN202K	
D1205	8-719-988-61	DIODE 1SS355TE-17	
D1206	8-719-056-72	DIODE UDZ-TE-17-2.4B	
D1301	8-719-073-01	DIODE MA111-(K8).S0	
D1401	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D1402	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D1403	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D1404	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D1405	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D1406	8-719-914-43	DIODE DAN202K	
D1409	8-719-422-12	DIODE MA8039	
D1410	8-719-402-92	DIODE MA3220M-TX	
D1411	8-719-402-92	DIODE MA3220M-TX	
D1412	8-719-988-61	DIODE 1SS355TE-17	
		<FERRITBEAD>	
FB1301	1-216-295-91	SHORT 0	
		<IC>	
IC1101	8-759-190-89	IC TDA7265	
IC1201	8-759-273-12	IC TDA7315D013TR	
IC1202	8-759-576-76	IC TDA2822D013TR	
IC1301	8-759-042-02	IC S-80743AL-A7-S	
IC1601	8-759-069-28	IC PQ05RF11	
IC1602	8-759-095-63	IC PQ09RF2	
IC1603	8-759-520-49	IC PQ30RV21	
IC1604	8-759-644-37	IC PQ5EV3	
IC1605	8-759-069-28	IC PQ05RF11	
		<CHIP CONDUCTOR>	
JR1001	1-216-295-91	SHORT 0	
JR1002	1-216-295-91	SHORT 0	
JR1003	1-216-295-91	SHORT 0	
JR1004	1-216-295-91	SHORT 0	
JR1005	1-216-295-91	SHORT 0	
JR1006	1-216-295-91	SHORT 0	
JR1007	1-216-295-91	SHORT 0	
JR1008	1-216-295-91	SHORT 0	
JR1009	1-216-295-91	SHORT 0	
JR1010	1-216-295-91	SHORT 0	
JR1011	1-216-295-91	SHORT 0	
JR1013	1-216-295-91	SHORT 0	
JR1014	1-216-295-91	SHORT 0	
JR1015	1-216-295-91	SHORT 0	
JR1016	1-216-295-91	SHORT 0	
JR1017	1-216-295-91	SHORT 0	
JR1018	1-216-295-91	SHORT 0	
JR1019	1-216-295-91	SHORT 0	
JR1020	1-216-295-91	SHORT 0	
JR1023	1-216-295-91	SHORT 0	
JR1028	1-216-295-91	SHORT 0	
JR1031	1-216-295-91	SHORT 0	
JR1032	1-216-295-91	SHORT 0	
JR1033	1-216-295-91	SHORT 0	
JR1034	1-216-295-91	SHORT 0	
JR1035	1-216-295-91	SHORT 0	
JR1201	1-216-295-91	SHORT 0	
JR1202	1-216-295-91	SHORT 0	
JR1303	1-216-295-91	SHORT 0	
JR1305	1-216-295-91	SHORT 0	
JR1306	1-216-295-91	SHORT 0	
JR1601	1-216-295-91	SHORT 0	

REF.NO.	PART NO.	DESCRIPTION				REMARK
JR1603	1-216-295-91	SHORT	0			
JR1604	1-414-193-41	INDUCTOR	220µH			
	<COIL>					
L1304	1-414-856-11	INDUCTOR	10µH			
L1305	1-414-856-11	INDUCTOR	10µH			
L1306	1-414-856-11	INDUCTOR	10µH			
L1307	1-414-856-11	INDUCTOR	10µH			
L1308	1-414-856-11	INDUCTOR	10µH			
L1309	1-414-856-11	INDUCTOR	10µH			
L1310	1-414-856-11	INDUCTOR	10µH			
L1311	1-414-856-11	INDUCTOR	10µH			
L1312	1-414-856-11	INDUCTOR	10µH			
L1313	1-414-856-11	INDUCTOR	10µH			
L1314	1-414-856-11	INDUCTOR	10µH			
	<TRANSISTOR>					
Q1101	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1102	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R			
Q1103	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1104	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1105	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1106	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R			
Q1201	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R			
Q1202	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1203	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R			
Q1204	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1205	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1206	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1207	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1208	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1209	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R			
Q1308	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R			
Q1309	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R			
Q1310	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1311	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R			
Q1312	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1401	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R			
Q1402	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1409	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R			
	<RESISTOR>					
R1101	1-216-081-00	RES-CHIP	22K	5%	1/10W	
R1102	1-216-097-91	RES-CHIP	100K	5%	1/10W	
R1103	1-249-377-11	CARBON	0.47	5%	1/4W	
R1104	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R1105	1-216-113-00	RES-CHIP	470K	5%	1/10W	
R1106	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R1107	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	
R1108	1-216-073-00	RES-CHIP	10K	5%	1/10W	
R1109	1-216-041-00	RES-CHIP	470	5%	1/10W	
R1110	1-216-073-00	RES-CHIP	10K	5%	1/10W	
R1111	1-216-041-00	RES-CHIP	470	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1112	1-216-295-91	SHORT	0			
R1113	1-216-061-00	RES-CHIP	3.3K	5%	1/10W	
R1114	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R1115	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R1116	1-216-295-91	SHORT	0			
R1117	1-216-061-00	RES-CHIP	3.3K	5%	1/10W	
R1118	1-216-079-00	RES-CHIP	18K	5%	1/10W	
R1119	1-216-079-00	RES-CHIP	18K	5%	1/10W	
R1120	1-216-043-91	RES-CHIP	560	5%	1/10W	
R1121	1-216-043-91	RES-CHIP	560	5%	1/10W	
R1122	1-216-357-00	METAL OXIDE	4.7	5%	1W	
R1123	1-249-381-11	CARBON	1	5%	1/4W	
R1124	1-216-357-00	METAL OXIDE	4.7	5%	1W	
R1126	1-216-073-00	RES-CHIP	10K	5%	1/10W	
R1127	1-216-073-00	RES-CHIP	10K	5%	1/10W	
R1128	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R1130	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R1131	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R1201	1-216-033-00	RES-CHIP	220	5%	1/10W	
R1202	1-216-033-00	RES-CHIP	220	5%	1/10W	
R1203	1-216-033-00	RES-CHIP	220	5%	1/10W	
R1204	1-216-033-00	RES-CHIP	220	5%	1/10W	
R1206	1-216-067-00	RES-CHIP	5.6K	5%	1/10W	
R1207	1-216-295-91	SHORT	0			
R1209	1-216-067-00	RES-CHIP	5.6K	5%	1/10W	
R1210	1-216-295-91	SHORT	0			
R1211	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
R1212	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R1213	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R1214	1-216-073-00	RES-CHIP	10K	5%	1/10W	
R1215	1-216-067-00	RES-CHIP	5.6K	5%	1/10W	
R1216	1-216-097-91	RES-CHIP	100K	5%	1/10W	
R1217	1-216-097-91	RES-CHIP	100K	5%	1/10W	
R1218	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R1219	1-216-073-00	RES-CHIP	10K	5%	1/10W	
R1220	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R1221	1-216-073-00	RES-CHIP	10K	5%	1/10W	
R1222	1-216-081-00	RES-CHIP	22K	5%	1/10W	
R1223	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
R1224	1-216-081-00	RES-CHIP	22K	5%	1/10W	
R1225	1-216-033-00	RES-CHIP	220	5%	1/10W	
R1226	1-216-033-00	RES-CHIP	220	5%	1/10W	
R1228	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	
R1229	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	
R1230	1-216-308-00	RES-CHIP	4.7	5%	1/10W	
R1231	1-216-295-91	SHORT	0			
R1232	1-216-295-91	SHORT	0			
R1233	1-216-295-91	SHORT	0			
R1234	1-216-295-91	SHORT	0			
R1235	1-216-081-00	RES-CHIP	22K	5%	1/10W	
R1236	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R1237	1-216-081-00	RES-CHIP	22K	5%	1/10W	
R1249	1-216-308-00	RES-CHIP	4.7	5%	1/10W	
R1329	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	
R1330	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	
R1331	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

A1 **M1**

REF.NO.	PART NO.	DESCRIPTION			REMARK
R1332	1-216-043-91	RES-CHIP	560	5%	1/10W
R1333	1-216-039-00	RES-CHIP	390	5%	1/10W
R1334	1-216-025-91	RES-CHIP	100	5%	1/10W
R1335	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1336	1-216-025-91	RES-CHIP	100	5%	1/10W
R1337	1-216-017-91	RES-CHIP	47	5%	1/10W
R1338	1-216-295-91	SHORT	0		
R1341	1-216-025-91	RES-CHIP	100	5%	1/10W
R1342	1-216-295-91	SHORT	0		
R1344	1-216-043-91	RES-CHIP	560	5%	1/10W
R1345	1-216-039-00	RES-CHIP	390	5%	1/10W
R1346	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1347	1-216-025-91	RES-CHIP	100	5%	1/10W
R1348	1-216-025-91	RES-CHIP	100	5%	1/10W
R1349	1-216-025-91	RES-CHIP	100	5%	1/10W
R1350	1-216-025-91	RES-CHIP	100	5%	1/10W
R1351	1-216-017-91	RES-CHIP	47	5%	1/10W
R1352	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1402	1-216-081-00	RES-CHIP	22K	5%	1/10W
R1403	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R1404	1-216-025-91	RES-CHIP	100	5%	1/10W
R1405	1-208-826-11	METAL CHIP	68K	0.5%	1/10W
R1406	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R1407	1-208-817-11	METAL CHIP	30K	0.5%	1/10W
R1408	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R1409	1-216-081-00	RES-CHIP	22K	5%	1/10W
R1436	1-216-295-91	SHORT	0		
R1437	1-216-295-91	SHORT	0		
R1438	1-216-295-91	SHORT	0		
R1439	1-216-295-91	SHORT	0		
R1440	1-216-295-91	SHORT	0		
R1441	1-216-295-91	SHORT	0		
R1452	1-216-295-91	SHORT	0		
R1453	1-216-295-91	SHORT	0		
R1460	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1461	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1462	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1601	1-216-295-91	SHORT	0		
R1608	1-208-778-11	METAL CHIP	680	0.5%	1/10W
R1610	1-208-772-11	METAL CHIP	390	0.5%	1/10W
R1611	1-208-772-11	METAL CHIP	390	0.5%	1/10W
R1613	1-208-772-11	METAL CHIP	390	0.5%	1/10W

<RELAY>

REF.NO.	PART NO.	DESCRIPTION
RY1101	1-755-028-11	RELAY
RY1102	1-755-028-11	RELAY

<TUNER>

REF.NO.	PART NO.	DESCRIPTION
TU1303⚠	8-598-508-10	TUNER, FSS BTF-LG436
TU1304⚠	8-598-452-20	TUNER, FSS BTF-WG442

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* A-1306-588-A M1 BOARD, COMPLETE
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<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C001	1-126-960-11	ELECT	1μF	20%	50V
C002	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C003	1-163-037-11	CERAMIC CHIP	0.022μF	10%	50V
C004	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C007	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C010	1-126-933-11	ELECT	100μF	20%	16V
C013	1-163-989-11	CERAMIC CHIP	0.033μF	10%	25V
C014	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C015	1-163-239-11	CERAMIC CHIP	33pF	5%	50V
C016	1-163-239-11	CERAMIC CHIP	33pF	5%	50V
C017	1-163-227-11	CERAMIC CHIP	10pF	0.50pF	50V
C018	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C019	1-163-243-11	CERAMIC CHIP	47pF	5%	50V
C020	1-163-245-11	CERAMIC CHIP	56pF	5%	50V
C021	1-163-227-11	CERAMIC CHIP	10pF	0.50pF	50V
C022	1-163-227-11	CERAMIC CHIP	10pF	0.50pF	50V
C023	1-126-967-11	ELECT	47μF	20%	50V
C024	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C025	1-126-933-11	ELECT	100μF	20%	16V
C026	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V
C027	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C028	1-126-933-11	ELECT	100μF	20%	16V
C030	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C032	1-126-933-11	ELECT	100μF	20%	16V
C033	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C034	1-163-243-11	CERAMIC CHIP	47pF	5%	50V
C035	1-163-001-11	CERAMIC CHIP	220pF	10%	50V
C036	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C037	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C038	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C039	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C040	1-164-005-11	CERAMIC CHIP	0.47μF		25V
C041	1-163-001-11	CERAMIC CHIP	220pF	10%	50V
C042	1-163-001-11	CERAMIC CHIP	220pF	10%	50V
C043	1-126-933-11	ELECT	100μF	20%	16V
C045	1-104-665-11	ELECT	100μF	20%	25V
C046	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C048	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C049	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C050	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C051	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C052	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C054	1-126-933-11	ELECT	100μF	20%	16V
C055	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C056	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C059	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C060	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C061	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C062	1-163-259-91	CERAMIC CHIP	220pF	5%	50V

M1

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<CONNECTOR>	
CN001	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P	
		<DIODE>	
D003	8-719-988-61	DIODE 1SS355TE-17	
D004	8-719-988-61	DIODE 1SS355TE-17	
D007	8-719-988-61	DIODE 1SS355TE-17	
D008	8-719-988-61	DIODE 1SS355TE-17	
D009	8-719-988-61	DIODE 1SS355TE-17	
D015	8-719-988-61	DIODE 1SS355TE-17	
D017	8-719-988-61	DIODE 1SS355TE-17	
		<FERRITBEAD>	
FB001	1-414-233-22	INDUCTOR CHIP 0µH	
FB002	1-414-233-22	INDUCTOR CHIP 0µH	
FB003	1-414-233-22	INDUCTOR CHIP 0µH	
FB004	1-414-233-22	INDUCTOR CHIP 0µH	
FB005	1-414-233-22	INDUCTOR CHIP 0µH	
FB006	1-414-233-22	INDUCTOR CHIP 0µH	
FB007	1-414-233-22	INDUCTOR CHIP 0µH	
FB008	1-414-233-22	INDUCTOR CHIP 0µH	
FB009	1-414-233-22	INDUCTOR CHIP 0µH	
FB010	1-414-233-22	INDUCTOR CHIP 0µH	
FB011	1-414-233-22	INDUCTOR CHIP 0µH	
FB012	1-414-233-22	INDUCTOR CHIP 0µH	
		<FILTER>	
FL001	1-236-071-11	ENCAPSULATED COMPONENT	
		<IC>	
IC001	8-759-042-02	IC S-80743AL-A7-S	
IC002	8-752-916-27	IC CXP750096-025Q-TL	
IC003	8-759-652-13	IC SDA5254-2B006	
IC004	8-759-675-64	IC M24C08-MN6T(A)	
IC005	8-759-671-94	IC MC74HC4053AFEL	
IC006	8-759-575-71	IC M24C04-WMN6T	
IC007	8-759-042-02	IC S-80743AL-A7-S	
IC008	8-759-242-68	IC TC7W32F	
IC009	8-759-242-78	IC TC7W02F	
IC010	8-759-242-74	IC TC7W04F	
		<CHIP CONDUCTOR>	
JR001	1-216-295-91	SHORT 0	
JR002	1-216-295-91	SHORT 0	
		<COIL>	
L002	1-408-591-11	INDUCTOR 1µH	
L003	1-408-603-31	INDUCTOR 10µH	
L004	1-408-603-31	INDUCTOR 10µH	
L005	1-408-602-31	INDUCTOR 8.2µH	
L006	1-408-603-31	INDUCTOR 10µH	
		<TRANSISTOR>	
Q004	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q005	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q006	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q008	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q009	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q010	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q014	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q015	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q016	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q017	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q018	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q019	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q020	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q021	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q022	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q023	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		<RESISTOR>	
R001	1-216-073-00	RES-CHIP 10K 5% 1/10W	
R002	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
R003	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
R004	1-216-025-91	RES-CHIP 100 5% 1/10W	
R005	1-216-025-91	RES-CHIP 100 5% 1/10W	
R006	1-216-025-91	RES-CHIP 100 5% 1/10W	
R007	1-216-025-91	RES-CHIP 100 5% 1/10W	
R008	1-216-025-91	RES-CHIP 100 5% 1/10W	
R009	1-216-025-91	RES-CHIP 100 5% 1/10W	
R011	1-216-025-91	RES-CHIP 100 5% 1/10W	
R012	1-216-025-91	RES-CHIP 100 5% 1/10W	
R013	1-216-025-91	RES-CHIP 100 5% 1/10W	
R015	1-216-295-91	SHORT 0	
R021	1-216-025-91	RES-CHIP 100 5% 1/10W	
R022	1-216-025-91	RES-CHIP 100 5% 1/10W	
R023	1-216-025-91	RES-CHIP 100 5% 1/10W	
R024	1-216-049-91	RES-CHIP 1K 5% 1/10W	
R026	1-216-025-91	RES-CHIP 100 5% 1/10W	
R027	1-216-033-00	RES-CHIP 220 5% 1/10W	
R030	1-216-025-91	RES-CHIP 100 5% 1/10W	
R031	1-216-049-91	RES-CHIP 1K 5% 1/10W	
R032	1-216-049-91	RES-CHIP 1K 5% 1/10W	
R033	1-216-049-91	RES-CHIP 1K 5% 1/10W	
R034	1-216-049-91	RES-CHIP 1K 5% 1/10W	
R035	1-208-792-11	METAL CHIP 2.7K 0.5% 1/10W	
R036	1-216-025-91	RES-CHIP 100 5% 1/10W	
R037	1-216-049-91	RES-CHIP 1K 5% 1/10W	
R038	1-216-025-91	RES-CHIP 100 5% 1/10W	
R039	1-216-049-91	RES-CHIP 1K 5% 1/10W	
R040	1-216-025-91	RES-CHIP 100 5% 1/10W	
R042	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
R043	1-216-033-00	RES-CHIP 220 5% 1/10W	
R044	1-216-045-00	RES-CHIP 680 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION			REMARK
R047	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R048	1-216-049-91	RES-CHIP	1K	5%	1/10W
R049	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R050	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R051	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R052	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R053	1-216-045-00	RES-CHIP	680	5%	1/10W
R054	1-216-025-91	RES-CHIP	100	5%	1/10W
R055	1-216-025-91	RES-CHIP	100	5%	1/10W
R058	1-208-816-11	METAL CHIP	27K	0.5%	1/10W
R059	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R060	1-216-045-00	RES-CHIP	680	5%	1/10W
R061	1-216-025-91	RES-CHIP	100	5%	1/10W
R063	1-216-025-91	RES-CHIP	100	5%	1/10W
R064	1-216-025-91	RES-CHIP	100	5%	1/10W
R065	1-208-758-11	METAL CHIP	100	0.5%	1/10W
R067	1-208-758-11	METAL CHIP	100	0.5%	1/10W
R068	1-216-295-91	SHORT	0		
R069	1-208-758-11	METAL CHIP	100	0.5%	1/10W
R070	1-216-295-91	SHORT	0		
R071	1-216-295-91	SHORT	0		
R072	1-216-295-91	SHORT	0		
R073	1-216-025-91	RES-CHIP	100	5%	1/10W
R078	1-216-025-91	RES-CHIP	100	5%	1/10W
R079	1-216-025-91	RES-CHIP	100	5%	1/10W
R080	1-216-121-91	RES-CHIP	1M	5%	1/10W
R081	1-216-041-00	RES-CHIP	470	5%	1/10W
R082	1-216-089-91	RES-CHIP	47K	5%	1/10W
R083	1-216-049-91	RES-CHIP	1K	5%	1/10W
R085	1-216-037-00	RES-CHIP	330	5%	1/10W
R086	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R088	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R089	1-216-073-00	RES-CHIP	10K	5%	1/10W
R090	1-216-033-00	RES-CHIP	220	5%	1/10W
R091	1-216-033-00	RES-CHIP	220	5%	1/10W
R092	1-216-073-00	RES-CHIP	10K	5%	1/10W
R093	1-216-025-91	RES-CHIP	100	5%	1/10W
R094	1-216-025-91	RES-CHIP	100	5%	1/10W
R095	1-216-033-00	RES-CHIP	220	5%	1/10W
R099	1-216-295-91	SHORT	0		
R100	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R101	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R102	1-216-295-91	SHORT	0		
R103	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R104	1-216-295-91	SHORT	0		
R105	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R106	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R107	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R108	1-216-049-91	RES-CHIP	1K	5%	1/10W
R109	1-216-025-91	RES-CHIP	100	5%	1/10W
R110	1-216-049-91	RES-CHIP	1K	5%	1/10W
R111	1-216-025-91	RES-CHIP	100	5%	1/10W
R112	1-216-049-91	RES-CHIP	1K	5%	1/10W
R113	1-216-025-91	RES-CHIP	100	5%	1/10W
R114	1-216-049-91	RES-CHIP	1K	5%	1/10W
R119	1-216-295-91	SHORT	0		
R120	1-216-073-00	RES-CHIP	10K	5%	1/10W
R121	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R123	1-216-017-91	RES-CHIP	47	5%	1/10W
R124	1-216-025-91	RES-CHIP	100	5%	1/10W
R125	1-216-025-91	RES-CHIP	100	5%	1/10W
R126	1-216-049-91	RES-CHIP	1K	5%	1/10W
R127	1-216-049-91	RES-CHIP	1K	5%	1/10W
R128	1-216-049-91	RES-CHIP	1K	5%	1/10W
R129	1-216-049-91	RES-CHIP	1K	5%	1/10W
R131	1-216-073-00	RES-CHIP	10K	5%	1/10W
R132	1-216-049-91	RES-CHIP	1K	5%	1/10W
R133	1-216-025-91	RES-CHIP	100	5%	1/10W
R134	1-216-041-00	RES-CHIP	470	5%	1/10W
R135	1-216-025-91	RES-CHIP	100	5%	1/10W
R137	1-216-295-91	SHORT	0		
R138	1-216-041-00	RES-CHIP	470	5%	1/10W
R139	1-216-049-91	RES-CHIP	1K	5%	1/10W
R140	1-216-073-00	RES-CHIP	10K	5%	1/10W
R141	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R142	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R143	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R144	1-216-033-00	RES-CHIP	220	5%	1/10W

<CRYSTAL>

REF.NO.	PART NO.	DESCRIPTION
X001	1-567-928-11	VIBLATOR, CERAMIC (20MHz)
X002	1-781-685-21	VIBRATOR, CRYSTAL (6MHz)

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* A-1346-922-A E BOARD, COMPLETE
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<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C4301	1-126-960-11	ELECT	1μF	20%	50V
C4302	1-164-489-11	CERAMIC CHIP	0.22μF	10%	16V
C4303	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V
C4304	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C4306	1-126-964-11	ELECT	10μF	20%	50V
C4307	1-163-137-00	CERAMIC CHIP	680pF	5%	50V
C4311	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C4312	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C4313	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C4315	1-163-222-11	CERAMIC CHIP	5pF	0.25pF	50V
C4316	1-104-664-11	ELECT	47μF	20%	25V
C4317	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C4318	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C4319	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C4324	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C4325	1-163-093-00	CERAMIC CHIP	10pF	5%	50V
C4329	1-126-963-11	ELECT	4.7μF	20%	50V
C4330	1-137-581-11	FILM	0.1μF	5%	100V
C4331	1-126-959-11	ELECT	0.47μF	20%	50V
C4333	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C4334	1-126-967-11	ELECT	47μF	20%	50V
C4336	1-126-967-11	ELECT	47μF	20%	50V

REF.NO.	PART NO.	DESCRIPTION				REMARK
C4338	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4340	1-126-967-11	ELECT	47µF	20%	50V	
C4342	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V	
C4343	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4344	1-126-960-11	ELECT	1µF	20%	50V	
C4345	1-126-967-11	ELECT	47µF	20%	50V	
C4346	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4347	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4348	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4349	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4350	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4351	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V	
C4352	1-126-967-11	ELECT	47µF	20%	50V	
C4353	1-107-823-11	CERAMIC CHIP	0.47µF	10%	16V	
C4354	1-107-823-11	CERAMIC CHIP	0.47µF	10%	16V	
C4355	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4356	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4357	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4358	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4359	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V	
C4360	1-126-964-11	ELECT	10µF	20%	50V	
C4362	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4363	1-126-967-11	ELECT	47µF	20%	50V	
C4364	1-126-967-11	ELECT	47µF	20%	50V	
C4368	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4369	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4370	1-126-967-11	ELECT	47µF	20%	50V	
C4371	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4372	1-164-505-11	CERAMIC CHIP	2.2µF		16V	
C4373	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4374	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4377	1-126-960-11	ELECT	1µF	20%	50V	
C4382	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4383	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4384	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	
C4601	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V	
	<CONNECTOR>					
CN4101	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P				
CN4500	* 1-564-512-11	PLUG, CONNECTOR 9P				
CN4502	* 1-564-507-11	PLUG, CONNECTOR 4P				
	<DIODE>					
D4304	8-719-977-22	DIODE DTZ9.1				
D4305	8-719-977-22	DIODE DTZ9.1				
D4601	8-719-401-63	DIODE MA3062M-TX				
D4602	8-719-914-43	DIODE DAN202K				
D4603	8-719-914-43	DIODE DAN202K				
	<FERRITBEAD>					
FB4387	1-216-295-91	SHORT	0			
FB4388	1-216-295-91	SHORT	0			
FB4389	1-216-295-91	SHORT	0			
	<IC>					
IC4301	8-752-090-87	IC CXA2100AQ				
	<CHIP CONDUCTOR>					
JR4301	1-216-295-91	SHORT	0			
JR4302	1-216-037-00	RES-CHIP	330	5%	1/10W	
	<COIL>					
L4301	1-412-029-11	INDUCTOR CHIP	10µH			
L4302	1-412-029-11	INDUCTOR CHIP	10µH			
L4303	1-412-029-11	INDUCTOR CHIP	10µH			
L4304	1-412-029-11	INDUCTOR CHIP	10µH			
L4305	1-412-029-11	INDUCTOR CHIP	10µH			
L4306	1-412-029-11	INDUCTOR CHIP	10µH			
L4308	1-412-031-11	INDUCTOR CHIP	47µH			
L4309	1-412-031-11	INDUCTOR CHIP	47µH			
	<TRANSISTOR>					
Q4301	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q4303	8-729-216-22	TRANSISTOR 2SA1162-G				
Q4304	8-729-216-22	TRANSISTOR 2SA1162-G				
Q4307	8-729-216-22	TRANSISTOR 2SA1162-G				
Q4308	8-729-216-22	TRANSISTOR 2SA1162-G				
Q4310	8-729-216-22	TRANSISTOR 2SA1162-G				
Q4316	8-729-216-22	TRANSISTOR 2SA1162-G				
Q4317	8-729-216-22	TRANSISTOR 2SA1162-G				
Q4318	8-729-216-22	TRANSISTOR 2SA1162-G				
Q4319	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q4320	8-729-216-22	TRANSISTOR 2SA1162-G				
Q4321	8-729-216-22	TRANSISTOR 2SA1162-G				
Q4322	8-729-216-22	TRANSISTOR 2SA1162-G				
Q4323	8-729-216-22	TRANSISTOR 2SA1162-G				
Q4324	8-729-216-22	TRANSISTOR 2SA1162-G				
Q4601	1-801-806-11	TRANSISTOR DTC144EKA				
Q4602	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
	<RESISTOR>					
R4301	1-216-025-91	RES-CHIP	100	5%	1/10W	
R4302	1-216-025-91	RES-CHIP	100	5%	1/10W	
R4303	1-216-025-91	RES-CHIP	100	5%	1/10W	
R4304	1-216-025-91	RES-CHIP	100	5%	1/10W	
R4305	1-216-025-91	RES-CHIP	100	5%	1/10W	
R4306	1-216-045-00	RES-CHIP	680	5%	1/10W	
R4307	1-216-295-91	SHORT	0			
R4309	1-216-295-91	SHORT	0			
R4313	1-216-033-00	RES-CHIP	220	5%	1/10W	
R4314	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R4315	1-216-063-91	RES-CHIP	3.9K	5%	1/10W	
R4316	1-216-037-00	RES-CHIP	330	5%	1/10W	
R4317	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R4319	1-216-073-00	RES-CHIP	10K	5%	1/10W	
R4320	1-216-689-11	RES-CHIP	39K	5%	1/10W	

E **J1**

REF.NO.	PART NO.	DESCRIPTION			REMARK
R4321	1-216-105-91	RES-CHIP	220K	5%	1/10W
R4322	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4323	1-216-091-00	RES-CHIP	56K	5%	1/10W
R4324	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R4325	1-216-093-91	RES-CHIP	68K	5%	1/10W
R4331	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R4334	1-216-025-91	RES-CHIP	100	5%	1/10W
R4335	1-216-025-91	RES-CHIP	100	5%	1/10W
R4336	1-216-025-91	RES-CHIP	100	5%	1/10W
R4337	1-216-025-91	RES-CHIP	100	5%	1/10W
R4339	1-249-409-11	CARBON	220	5%	1/4W
R4340	1-216-111-00	RES-CHIP	390K	5%	1/10W
R4341	1-216-295-91	SHORT	0		
R4343	1-216-025-91	RES-CHIP	100	5%	1/10W
R4344	1-216-025-91	RES-CHIP	100	5%	1/10W
R4345	1-216-075-00	RES-CHIP	12K	5%	1/10W
R4346	1-208-812-11	METAL CHIP	18K	0.5%	1/10W
R4347	1-216-025-91	RES-CHIP	100	5%	1/10W
R4348	1-216-025-91	RES-CHIP	100	5%	1/10W
R4349	1-216-033-00	RES-CHIP	220	5%	1/10W
R4350	1-216-025-91	RES-CHIP	100	5%	1/10W
R4352	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4354	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R4355	1-216-295-91	SHORT	0		
R4357	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R4358	1-208-804-11	METAL CHIP	8.2K	0.5%	1/10W
R4359	1-216-041-00	RES-CHIP	470	5%	1/10W
R4360	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R4361	1-216-133-00	RES-CHIP	3.3M	5%	1/10W
R4363	1-216-025-91	RES-CHIP	100	5%	1/10W
R4365	1-216-017-91	RES-CHIP	47	5%	1/10W
R4366	1-216-017-91	RES-CHIP	47	5%	1/10W
R4367	1-216-017-91	RES-CHIP	47	5%	1/10W
R4370	1-216-049-91	RES-CHIP	1K	5%	1/10W
R4372	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R4375	1-216-033-00	RES-CHIP	220	5%	1/10W
R4377	1-216-033-00	RES-CHIP	220	5%	1/10W
R4380	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4382	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4384	1-216-025-91	RES-CHIP	100	5%	1/10W
R4385	1-216-129-00	RES-CHIP	2.2M	5%	1/10W
R4387	1-216-017-91	RES-CHIP	47	5%	1/10W
R4388	1-216-017-91	RES-CHIP	47	5%	1/10W
R4389	1-216-017-91	RES-CHIP	47	5%	1/10W
R4393	1-216-025-91	RES-CHIP	100	5%	1/10W
R4395	1-216-295-91	SHORT	0		
R4396	1-216-295-91	SHORT	0		
R4397	1-216-295-91	SHORT	0		
R4400	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R4401	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R4402	1-216-049-91	RES-CHIP	1K	5%	1/10W
R4403	1-216-298-00	RES-CHIP	2.2	5%	1/10W
R4404	1-216-081-00	RES-CHIP	22K	5%	1/10W
R4405	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R4406	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4407	1-216-017-91	RES-CHIP	47	5%	1/10W
R4408	1-249-409-11	CARBON	220	5%	1/4W
R4504	1-216-025-91	RES-CHIP	100	5%	1/10W
R4514	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R4515	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R4516	1-216-049-91	RES-CHIP	1K	5%	1/10W
R4517	1-216-049-91	RES-CHIP	1K	5%	1/10W
R4518	1-216-025-91	RES-CHIP	100	5%	1/10W
R4519	1-216-025-91	RES-CHIP	100	5%	1/10W
R4520	1-216-045-00	RES-CHIP	680	5%	1/10W
R4521	1-216-045-00	RES-CHIP	680	5%	1/10W
R4522	1-216-025-91	RES-CHIP	100	5%	1/10W
R4523	1-216-025-91	RES-CHIP	100	5%	1/10W
R4524	1-216-049-91	RES-CHIP	1K	5%	1/10W
R4601	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R4602	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4603	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
	<INDUCTOR>				
T4301	1-469-893-21	INDUCTOR (EMI REMOVE FILTER)			
	<CRYSTAL>				
X4300	1-767-127-11	VIBRATOR, CERAMIC (503.5kHz)			

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* A-1394-982-A J1 BOARD, COMPLETE

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<CAPACITOR>

C8301	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C8302	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C8303	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C8304	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C8305	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C8306	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C8307	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C8308	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C8309	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C8310	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C8311	1-164-346-11	CERAMIC CHIP	1μF		16V
C8312	1-164-346-11	CERAMIC CHIP	1μF		16V
C8313	1-164-346-11	CERAMIC CHIP	1μF		16V
C8314	1-164-346-11	CERAMIC CHIP	1μF		16V
C8315	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C8316	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C8317	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8318	1-104-664-11	ELECT	47μF	20%	16V
C8319	1-104-664-11	ELECT	47μF	20%	16V
C8320	1-117-720-11	CERAMIC CHIP	4.7μF		10V
C8321	1-117-720-11	CERAMIC CHIP	4.7μF		10V
C8322	1-164-346-11	CERAMIC CHIP	1μF		16V
C8323	1-164-346-11	CERAMIC CHIP	1μF		16V
C8324	1-117-720-11	CERAMIC CHIP	4.7μF		10V
C8325	1-126-935-11	ELECT	470μF	20%	16V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C8326	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C8327	1-164-346-11	CERAMIC CHIP	1μF		16V
C8328	1-164-346-11	CERAMIC CHIP	1μF		16V
C8329	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8330	1-164-346-11	CERAMIC CHIP	1μF		16V
C8331	1-164-346-11	CERAMIC CHIP	1μF		16V
C8332	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C8333	1-117-720-11	CERAMIC CHIP	4.7μF		10V
C8334	1-163-249-11	CERAMIC CHIP	82pF	5%	50V
C8336	1-104-664-11	ELECT	47μF	20%	16V
C8337	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8338	1-164-346-11	CERAMIC CHIP	1μF		16V
C8339	1-164-346-11	CERAMIC CHIP	1μF		16V
C8340	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C8341	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C8342	1-126-964-11	ELECT	10μF	20%	50V
C8343	1-104-664-11	ELECT	47μF	20%	16V
C8344	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8345	1-104-664-11	ELECT	47μF	20%	16V
C8346	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8347	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C8348	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C8349	1-104-664-11	ELECT	47μF	20%	16V
C8350	1-164-346-11	CERAMIC CHIP	1μF		16V
C8351	1-164-346-11	CERAMIC CHIP	1μF		16V
C8352	1-104-664-11	ELECT	47μF	20%	16V
C8354	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C8355	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C8356	1-164-346-11	CERAMIC CHIP	1μF		16V
C8357	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C8358	1-164-346-11	CERAMIC CHIP	1μF		16V
C8359	1-163-037-11	CERAMIC CHIP	0.022μF	10%	50V
C8360	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C8361	1-126-961-11	ELECT	2.2μF	20%	50V
C8362	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8363	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8366	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C8367	1-104-664-11	ELECT	47μF	20%	16V
C8368	1-104-664-11	ELECT	47μF	20%	16V
C8369	1-104-664-11	ELECT	47μF	20%	16V
C8370	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8371	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8372	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8373	1-163-227-11	CERAMIC CHIP	10pF	0.50pF	50V
C8374	1-164-346-11	CERAMIC CHIP	1μF		16V
C8375	1-126-964-11	ELECT	10μF	20%	50V
C8376	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8381	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C8386	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C8390	1-126-963-11	ELECT	4.7μF	20%	50V
C8391	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8392	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8393	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8396	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C8399	1-126-961-11	ELECT	2.2μF	20%	50V
C8401	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C8402	1-164-346-11	CERAMIC CHIP	1μF		16V
C8403	1-163-037-11	CERAMIC CHIP	0.022μF	10%	50V
C8405	1-126-933-11	ELECT	100μF	20%	16V
C8406	1-104-664-11	ELECT	47μF	20%	16V
C8407	1-104-664-11	ELECT	47μF	20%	16V
C8408	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C8409	1-126-933-11	ELECT	100μF	20%	16V
C8410	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8412	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8414	1-104-664-11	ELECT	47μF	20%	16V
C8415	1-164-346-11	CERAMIC CHIP	1μF		16V
C8416	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8417	1-163-227-11	CERAMIC CHIP	10pF	0.50pF	50V
C8418	1-126-964-11	ELECT	10μF	20%	50V
C8419	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8424	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C8425	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C8437	1-126-963-11	ELECT	4.7μF	20%	50V
C8438	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8439	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8440	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8446	1-104-664-11	ELECT	47μF	20%	16V
C8447	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8448	1-164-690-91	CERAMIC CHIP	0.0022μF	5%	50V
C8450	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C8451	1-164-505-11	CERAMIC CHIP	2.2μF		16V
C8453	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8454	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8455	1-104-664-11	ELECT	47μF	20%	16V
C8464	1-115-340-11	CERAMIC CHIP	0.22μF	10%	25V
C8465	1-115-340-11	CERAMIC CHIP	0.22μF	10%	25V
C8466	1-104-664-11	ELECT	47μF	20%	16V
C8467	1-104-664-11	ELECT	47μF	20%	16V
C8468	1-115-340-11	CERAMIC CHIP	0.22μF	10%	25V
C8469	1-115-340-11	CERAMIC CHIP	0.22μF	10%	25V
C8474	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8477	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C8478	1-163-243-11	CERAMIC CHIP	47pF	5%	50V
C8479	1-163-239-11	CERAMIC CHIP	33pF	5%	50V
C8481	1-104-664-11	ELECT	47μF	20%	16V
C8482	1-104-664-11	ELECT	47μF	20%	16V
C8483	1-104-664-11	ELECT	47μF	20%	16V
C8485	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8492	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8501	1-163-113-00	CERAMIC CHIP	68pF	5%	50V
C8601	1-117-720-11	CERAMIC CHIP	4.7μF		10V
C8602	1-117-720-11	CERAMIC CHIP	4.7μF		10V
C8603	1-117-720-11	CERAMIC CHIP	4.7μF		10V
C8604	1-117-720-11	CERAMIC CHIP	4.7μF		10V
C8605	1-117-720-11	CERAMIC CHIP	4.7μF		10V
C8606	1-117-720-11	CERAMIC CHIP	4.7μF		10V
C8801	1-115-340-11	CERAMIC CHIP	0.22μF	10%	25V
C8802	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C8804	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C8805	1-126-933-11	ELECT	100μF	20%	16V
C8806	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V

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REF.NO.	PART NO.	DESCRIPTION	REMARK
C8807	1-163-037-11	CERAMIC CHIP 0.022µF 10% 50V	
C8808	1-126-933-11	ELECT 100µF 20% 16V	
C8809	1-163-021-91	CERAMIC CHIP 0.01µF 10% 50V	
C8810	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
C8811	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
C8812	1-104-664-11	ELECT 47µF 20% 16V	
C8813	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
C8814	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
C8815	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
C8816	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
C8817	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
C8818	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
C8819	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
C8820	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
C8821	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
C8823	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
C8824	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
C8826	1-164-004-11	CERAMIC CHIP 0.1µF 10% 25V	
C8828	1-104-664-11	ELECT 47µF 20% 16V	
C8829	1-163-241-11	CERAMIC CHIP 39pF 5% 50V	
C8830	1-104-664-11	ELECT 47µF 20% 16V	
	<CONNECTOR>		
CN8101	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P	
CN8301	* 1-564-526-31	PLUG, CONNECTOR 11P	
	<DIODE>		
D8101	8-719-977-69	DIODE DTZ24B	
D8102	8-719-977-69	DIODE DTZ24B	
D8103	8-719-977-69	DIODE DTZ24B	
D8104	8-719-977-69	DIODE DTZ24B	
D8301	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8302	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8303	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8304	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8305	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8306	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8307	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8308	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8309	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8310	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8311	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8312	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8313	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8314	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8315	8-719-914-42	DIODE DA204K	
D8316	8-719-914-42	DIODE DA204K	
D8317	8-719-914-42	DIODE DA204K	
D8318	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8319	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8320	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8321	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8322	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8323	8-719-056-85	DIODE UDZ-TE-17-8.2B	

REF.NO.	PART NO.	DESCRIPTION	REMARK
D8324	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8325	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8331	8-719-073-01	DIODE MA111-(K8).S0	
D8332	8-719-914-42	DIODE DA204K	
D8333	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8334	8-719-914-42	DIODE DA204K	
D8335	8-719-914-42	DIODE DA204K	
D8336	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D8337	8-719-073-01	DIODE MA111-(K8).S0	
	<FILTER>		
FL8301	1-236-071-11	ENCAPSULATED COMPONENT	
FL8302	1-236-071-11	ENCAPSULATED COMPONENT	
FL8303	1-236-071-11	ENCAPSULATED COMPONENT	
FL8304	1-236-071-11	ENCAPSULATED COMPONENT	
FL8305	1-236-071-11	ENCAPSULATED COMPONENT	
FL8307	1-236-071-11	ENCAPSULATED COMPONENT	
FL8308	1-236-071-11	ENCAPSULATED COMPONENT	
FL8309	1-236-071-11	ENCAPSULATED COMPONENT	
FL8311	1-236-071-11	ENCAPSULATED COMPONENT	
FL8312	1-236-071-11	ENCAPSULATED COMPONENT	
FL8313	1-233-877-11	FILTER, LOW PASS	
FL8314	1-233-504-21	FILTER, LOW PASS	
FL8315	1-233-504-21	FILTER, LOW PASS	
FL8801	1-236-071-11	ENCAPSULATED COMPONENT	
FL8802	1-236-071-11	ENCAPSULATED COMPONENT	
FL8803	1-233-765-21	FILTER	
FL8804	1-233-766-21	FILTER	
FL8805	1-233-768-21	FILTER	
	<IC>		
IC8302	8-752-080-04	IC CXA2069Q	
IC8304	8-759-242-76	IC TC7W08F	
IC8305	8-759-242-76	IC TC7W08F	
IC8306	8-752-096-08	IC CXA2123BQ-T6	
IC8308	8-752-096-08	IC CXA2123BQ-T6	
IC8309	8-759-337-26	IC MM1115XFBE	
IC8310	8-759-572-04	IC TDA9178T/N1.118	
IC8311	8-759-576-72	IC LF50CDT-TR	
IC8312	8-759-576-72	IC LF50CDT-TR	
IC8801	8-752-390-37	IC CXD2064Q-T6	
	<JACK>		
J8301	1-774-748-11	TERMINAL BLOCK, S (VIDEO IN 1)	
J8302	1-774-746-11	JACK BLOCK, PIN (VIDEO IN 2)	
J8303	1-774-746-11	JACK BLOCK, PIN (VIDEO IN 3)	
J8304	1-774-746-11	JACK BLOCK, PIN (MONITOR OUT)	
J8305	1-774-358-11	JACK BLOCK, PIN (COMPONENT IN)	
J8901	1-565-838-11	JACK BLOCK, PIN 2P (AUDIO OUT)	
	<COIL>		
L8101	1-402-711-11	INDUCTOR 0µH	

REF.NO.	PART NO.	DESCRIPTION	REMARK
L8102	1-402-711-11	INDUCTOR 0µH	
L8304	1-412-029-11	INDUCTOR CHIP 10µH	
L8305	1-414-196-41	INDUCTOR 47µH	
L8306	1-414-196-41	INDUCTOR 47µH	
L8307	1-414-196-41	INDUCTOR 47µH	
L8501	1-412-029-11	INDUCTOR CHIP 10µH	
L8801	1-412-029-11	INDUCTOR CHIP 10µH	
L8802	1-412-029-11	INDUCTOR CHIP 10µH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q8301	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8302	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8303	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8304	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8306	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8307	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8308	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8309	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8316	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8317	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8318	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8319	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8321	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8322	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8323	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8324	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8326	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8327	1-801-806-11	TRANSISTOR DTC144EKA	
Q8328	1-801-806-11	TRANSISTOR DTC144EKA	
Q8332	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8338	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8340	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8402	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8405	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8406	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8407	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8408	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8409	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8410	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8411	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8412	1-801-806-11	TRANSISTOR DTC144EKA	
Q8413	1-801-806-11	TRANSISTOR DTC144EKA	
Q8414	1-801-806-11	TRANSISTOR DTC144EKA	
Q8415	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8416	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8417	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8418	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8419	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8420	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8421	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8422	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8423	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8424	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8425	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8426	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8601	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8602	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8603	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8604	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8605	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8606	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8607	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8801	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8802	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8803	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8804	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8805	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8807	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8808	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8809	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q8810	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q8811	8-729-120-28	TRANSISTOR 2SC1623-L5L6	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
R8301	1-216-041-00	RES-CHIP 470 5% 1/10W	
R8302	1-216-041-00	RES-CHIP 470 5% 1/10W	
R8303	1-216-021-00	RES-CHIP 68 5% 1/10W	
R8304	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
R8305	1-216-105-91	RES-CHIP 220K 5% 1/10W	
R8306	1-216-022-00	RES-CHIP 75 5% 1/10W	
R8307	1-216-022-00	RES-CHIP 75 5% 1/10W	
R8308	1-216-105-91	RES-CHIP 220K 5% 1/10W	
R8309	1-216-105-91	RES-CHIP 220K 5% 1/10W	
R8310	1-216-022-00	RES-CHIP 75 5% 1/10W	
R8311	1-216-105-91	RES-CHIP 220K 5% 1/10W	
R8312	1-216-105-91	RES-CHIP 220K 5% 1/10W	
R8313	1-216-022-00	RES-CHIP 75 5% 1/10W	
R8314	1-216-105-91	RES-CHIP 220K 5% 1/10W	
R8315	1-216-105-91	RES-CHIP 220K 5% 1/10W	
R8316	1-216-113-00	RES-CHIP 470K 5% 1/10W	
R8317	1-216-022-00	RES-CHIP 75 5% 1/10W	
R8318	1-216-022-00	RES-CHIP 75 5% 1/10W	
R8319	1-216-022-00	RES-CHIP 75 5% 1/10W	
R8320	1-216-105-91	RES-CHIP 220K 5% 1/10W	
R8321	1-216-105-91	RES-CHIP 220K 5% 1/10W	
R8322	1-216-022-00	RES-CHIP 75 5% 1/10W	
R8323	1-216-025-91	RES-CHIP 100 5% 1/10W	
R8324	1-216-025-91	RES-CHIP 100 5% 1/10W	
R8325	1-216-025-91	RES-CHIP 100 5% 1/10W	
R8326	1-216-105-91	RES-CHIP 220K 5% 1/10W	
R8327	1-216-025-91	RES-CHIP 100 5% 1/10W	
R8328	1-216-113-00	RES-CHIP 470K 5% 1/10W	
R8329	1-216-113-00	RES-CHIP 470K 5% 1/10W	
R8330	1-216-022-00	RES-CHIP 75 5% 1/10W	
R8331	1-216-025-91	RES-CHIP 100 5% 1/10W	
R8332	1-216-025-91	RES-CHIP 100 5% 1/10W	
R8333	1-216-025-91	RES-CHIP 100 5% 1/10W	
R8334	1-216-025-91	RES-CHIP 100 5% 1/10W	
R8335	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R8336	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8337	1-216-022-00	RES-CHIP	75	5%	1/10W
R8338	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8339	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8340	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8341	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8342	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8343	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8344	1-216-022-00	RES-CHIP	75	5%	1/10W
R8345	1-216-025-91	RES-CHIP	100	5%	1/10W
R8346	1-216-025-91	RES-CHIP	100	5%	1/10W
R8347	1-216-025-91	RES-CHIP	100	5%	1/10W
R8348	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R8349	1-216-049-91	RES-CHIP	1K	5%	1/10W
R8350	1-216-049-91	RES-CHIP	1K	5%	1/10W
R8351	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8352	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8353	1-216-295-91	SHORT	0		
R8354	1-216-041-00	RES-CHIP	470	5%	1/10W
R8355	1-216-017-91	RES-CHIP	47	5%	1/10W
R8356	1-216-017-91	RES-CHIP	47	5%	1/10W
R8357	1-216-041-00	RES-CHIP	470	5%	1/10W
R8362	1-216-642-11	METAL CHIP	430	0.5%	1/10W
R8363	1-208-774-11	METAL CHIP	470	0.5%	1/10W
R8364	1-216-041-00	RES-CHIP	470	5%	1/10W
R8365	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R8366	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R8367	1-216-041-00	RES-CHIP	470	5%	1/10W
R8368	1-216-041-00	RES-CHIP	470	5%	1/10W
R8369	1-216-295-91	SHORT	0		
R8370	1-216-025-91	RES-CHIP	100	5%	1/10W
R8373	1-216-039-00	RES-CHIP	390	5%	1/10W
R8374	1-216-041-00	RES-CHIP	470	5%	1/10W
R8375	1-216-017-91	RES-CHIP	47	5%	1/10W
R8376	1-216-049-91	RES-CHIP	1K	5%	1/10W
R8377	1-216-025-91	RES-CHIP	100	5%	1/10W
R8378	1-216-033-00	RES-CHIP	220	5%	1/10W
R8379	1-216-033-00	RES-CHIP	220	5%	1/10W
R8380	1-216-025-91	RES-CHIP	100	5%	1/10W
R8381	1-216-025-91	RES-CHIP	100	5%	1/10W
R8382	1-216-033-00	RES-CHIP	220	5%	1/10W
R8383	1-216-033-00	RES-CHIP	220	5%	1/10W
R8384	1-216-025-91	RES-CHIP	100	5%	1/10W
R8385	1-216-025-91	RES-CHIP	100	5%	1/10W
R8386	1-216-025-91	RES-CHIP	100	5%	1/10W
R8387	1-216-017-91	RES-CHIP	47	5%	1/10W
R8388	1-216-031-00	RES-CHIP	180	5%	1/10W
R8389	1-216-033-00	RES-CHIP	220	5%	1/10W
R8390	1-216-017-91	RES-CHIP	47	5%	1/10W
R8391	1-216-017-91	RES-CHIP	47	5%	1/10W
R8392	1-216-017-91	RES-CHIP	47	5%	1/10W
R8393	1-216-017-91	RES-CHIP	47	5%	1/10W
R8394	1-216-025-91	RES-CHIP	100	5%	1/10W
R8395	1-216-033-00	RES-CHIP	220	5%	1/10W
R8396	1-216-033-00	RES-CHIP	220	5%	1/10W
R8397	1-216-025-91	RES-CHIP	100	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R8398	1-216-025-91	RES-CHIP	100	5%	1/10W
R8399	1-216-025-91	RES-CHIP	100	5%	1/10W
R8400	1-216-025-91	RES-CHIP	100	5%	1/10W
R8401	1-216-017-91	RES-CHIP	47	5%	1/10W
R8402	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R8403	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R8404	1-216-025-91	RES-CHIP	100	5%	1/10W
R8405	1-216-033-00	RES-CHIP	220	5%	1/10W
R8406	1-216-033-00	RES-CHIP	220	5%	1/10W
R8407	1-216-033-00	RES-CHIP	220	5%	1/10W
R8408	1-216-033-00	RES-CHIP	220	5%	1/10W
R8409	1-216-295-91	SHORT	0		
R8410	1-216-295-91	SHORT	0		
R8411	1-216-083-00	RES-CHIP	27K	5%	1/10W
R8412	1-216-025-91	RES-CHIP	100	5%	1/10W
R8413	1-216-041-00	RES-CHIP	470	5%	1/10W
R8414	1-208-796-11	METAL CHIP	3.9K	0.5%	1/10W
R8417	1-216-025-91	RES-CHIP	100	5%	1/10W
R8418	1-216-025-91	RES-CHIP	100	5%	1/10W
R8419	1-216-017-91	RES-CHIP	47	5%	1/10W
R8420	1-216-017-91	RES-CHIP	47	5%	1/10W
R8421	1-216-295-91	SHORT	0		
R8422	1-216-295-91	SHORT	0		
R8424	1-216-083-00	RES-CHIP	27K	5%	1/10W
R8425	1-216-089-91	RES-CHIP	47K	5%	1/10W
R8426	1-208-796-11	METAL CHIP	3.9K	0.5%	1/10W
R8427	1-216-295-91	SHORT	0		
R8428	1-216-295-91	SHORT	0		
R8431	1-216-295-91	SHORT	0		
R8432	1-216-295-91	SHORT	0		
R8436	1-216-017-91	RES-CHIP	47	5%	1/10W
R8437	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8438	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8439	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8440	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8441	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8443	1-216-025-91	RES-CHIP	100	5%	1/10W
R8444	1-216-025-91	RES-CHIP	100	5%	1/10W
R8445	1-216-017-91	RES-CHIP	47	5%	1/10W
R8446	1-216-295-91	SHORT	0		
R8447	1-216-041-00	RES-CHIP	470	5%	1/10W
R8448	1-216-033-00	RES-CHIP	220	5%	1/10W
R8449	1-216-041-00	RES-CHIP	470	5%	1/10W
R8451	1-216-041-00	RES-CHIP	470	5%	1/10W
R8452	1-216-041-00	RES-CHIP	470	5%	1/10W
R8453	1-216-033-00	RES-CHIP	220	5%	1/10W
R8454	1-216-041-00	RES-CHIP	470	5%	1/10W
R8455	1-216-041-00	RES-CHIP	470	5%	1/10W
R8456	1-216-041-00	RES-CHIP	470	5%	1/10W
R8458	1-216-049-91	RES-CHIP	1K	5%	1/10W
R8461	1-216-049-91	RES-CHIP	1K	5%	1/10W
R8464	1-216-041-00	RES-CHIP	470	5%	1/10W
R8465	1-216-089-91	RES-CHIP	47K	5%	1/10W
R8466	1-216-089-91	RES-CHIP	47K	5%	1/10W
R8467	1-216-113-00	RES-CHIP	470K	5%	1/10W
R8468	1-216-113-00	RES-CHIP	470K	5%	1/10W

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R8469	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8470	1-216-069-00	RES-CHIP	6.8K	5%	1/10W	
R8471	1-216-069-00	RES-CHIP	6.8K	5%	1/10W	
R8472	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	
R8473	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8478	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R8479	1-216-097-91	RES-CHIP	100K	5%	1/10W	
R8480	1-216-073-00	RES-CHIP	10K	5%	1/10W	
R8481	1-216-095-00	RES-CHIP	82K	5%	1/10W	
R8482	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R8484	1-216-045-00	RES-CHIP	680	5%	1/10W	
R8485	1-216-013-00	RES-CHIP	33	5%	1/10W	
R8487	1-216-045-00	RES-CHIP	680	5%	1/10W	
R8488	1-216-041-00	RES-CHIP	470	5%	1/10W	
R8490	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8494	1-216-295-91	SHORT	0			
R8496	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8502	1-216-295-91	SHORT	0			
R8503	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	
R8504	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8510	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8514	1-216-295-91	SHORT	0			
R8515	1-216-295-91	SHORT	0			
R8519	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8523	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8525	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8526	1-216-037-00	RES-CHIP	330	5%	1/10W	
R8529	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8530	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8531	1-216-295-91	SHORT	0			
R8535	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8536	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8537	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8539	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8542	1-216-041-00	RES-CHIP	470	5%	1/10W	
R8543	1-216-039-00	RES-CHIP	390	5%	1/10W	
R8544	1-216-041-00	RES-CHIP	470	5%	1/10W	
R8545	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8546	1-216-295-91	SHORT	0			
R8547	1-216-295-91	SHORT	0			
R8548	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8552	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8554	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8555	1-208-774-11	METAL CHIP	470	0.5%	1/10W	
R8556	1-216-081-00	RES-CHIP	22K	5%	1/10W	
R8557	1-208-768-11	METAL CHIP	270	0.5%	1/10W	
R8558	1-216-081-00	RES-CHIP	22K	5%	1/10W	
R8559	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8561	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8562	1-216-043-91	RES-CHIP	560	5%	1/10W	
R8563	1-216-081-00	RES-CHIP	22K	5%	1/10W	
R8564	1-216-033-00	RES-CHIP	220	5%	1/10W	
R8565	1-216-081-00	RES-CHIP	22K	5%	1/10W	
R8566	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8568	1-216-295-91	SHORT	0			
R8571	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8572	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8573	1-208-776-11	METAL CHIP	560	0.5%	1/10W	
R8574	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W	
R8575	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8577	1-216-295-91	SHORT	0			
R8580	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8581	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8582	1-208-776-11	METAL CHIP	560	0.5%	1/10W	
R8583	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W	
R8584	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8586	1-216-295-91	SHORT	0			
R8589	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8590	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8591	1-208-776-11	METAL CHIP	560	0.5%	1/10W	
R8592	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W	
R8593	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8595	1-216-295-91	SHORT	0			
R8596	1-216-295-91	SHORT	0			
R8601	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R8602	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8603	1-216-097-91	RES-CHIP	100K	5%	1/10W	
R8604	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8605	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R8606	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8607	1-216-097-91	RES-CHIP	100K	5%	1/10W	
R8608	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8609	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R8610	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8611	1-216-097-91	RES-CHIP	100K	5%	1/10W	
R8612	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8613	1-216-033-00	RES-CHIP	220	5%	1/10W	
R8614	1-216-031-00	RES-CHIP	180	5%	1/10W	
R8615	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8616	1-216-295-91	SHORT	0			
R8617	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R8618	1-216-097-91	RES-CHIP	100K	5%	1/10W	
R8619	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8620	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8621	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R8622	1-216-097-91	RES-CHIP	100K	5%	1/10W	
R8623	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8624	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8625	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R8626	1-216-097-91	RES-CHIP	100K	5%	1/10W	
R8627	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8628	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R8629	1-216-295-91	SHORT	0			
R8630	1-208-765-11	METAL CHIP	200	0.5%	1/10W	
R8631	1-216-033-00	RES-CHIP	220	5%	1/10W	
R8632	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8633	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8634	1-216-025-91	RES-CHIP	100	5%	1/10W	
R8801	1-216-017-91	RES-CHIP	47	5%	1/10W	
R8803	1-216-075-00	RES-CHIP	12K	5%	1/10W	
R8804	1-216-069-00	RES-CHIP	6.8K	5%	1/10W	
R8805	1-216-037-00	RES-CHIP	330	5%	1/10W	

J1 **BD**

REF.NO.	PART NO.	DESCRIPTION			REMARK
R8806	1-216-041-00	RES-CHIP	470	5%	1/10W
R8807	1-216-033-00	RES-CHIP	220	5%	1/10W
R8808	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R8809	1-216-037-00	RES-CHIP	330	5%	1/10W
R8810	1-216-043-91	RES-CHIP	560	5%	1/10W
R8811	1-216-091-00	RES-CHIP	56K	5%	1/10W
R8812	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R8813	1-216-049-91	RES-CHIP	1K	5%	1/10W
R8814	1-216-017-91	RES-CHIP	47	5%	1/10W
R8815	1-216-295-91	SHORT	0		
R8816	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R8819	1-216-295-91	SHORT	0		
R8820	1-208-770-11	METAL CHIP	330	0.5%	1/10W
R8821	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R8822	1-208-770-11	METAL CHIP	330	0.5%	1/10W
R8823	1-216-049-91	RES-CHIP	1K	5%	1/10W
R8824	1-208-793-11	METAL CHIP	3K	0.5%	1/10W
R8825	1-216-049-91	RES-CHIP	1K	5%	1/10W
R8826	1-216-047-91	RES-CHIP	820	5%	1/10W
R8827	1-208-789-11	METAL CHIP	2K	0.5%	1/10W
R8828	1-216-047-91	RES-CHIP	820	5%	1/10W
R8829	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R8830	1-216-295-91	SHORT	0		
R8832	1-216-295-91	SHORT	0		
R8834	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R8835	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R8838	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R8840	1-216-081-00	RES-CHIP	22K	5%	1/10W
R8841	1-216-081-00	RES-CHIP	22K	5%	1/10W
R8844	1-216-049-91	RES-CHIP	1K	5%	1/10W
R8847	1-216-295-91	SHORT	0		
R8848	1-216-295-91	SHORT	0		
R8849	1-216-035-00	RES-CHIP	270	5%	1/10W
R8851	1-216-041-00	RES-CHIP	470	5%	1/10W
R8852	1-216-041-00	RES-CHIP	470	5%	1/10W
R8853	1-216-093-91	RES-CHIP	68K	5%	1/10W
R8854	1-216-083-00	RES-CHIP	27K	5%	1/10W
R8855	1-216-043-91	RES-CHIP	560	5%	1/10W
R8856	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R8857	1-216-051-00	RES-CHIP	1.2K	5%	1/10W

<TERMINALBOARD>

REF.NO.	PART NO.	DESCRIPTION
TB8101	1-537-712-11	TERMINAL, PUSH (CENTER SP IN)

<CRYSTAL>

REF.NO.	PART NO.	DESCRIPTION
X8301	1-781-612-11	VIBRATOR, CRYSTAL (16.2MHz)
X8302	1-781-612-11	VIBRATOR, CRYSTAL (16.2MHz)

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REF.NO.	PART NO.	DESCRIPTION
*	A-1136-088-A	BD BOARD, COMPLETE

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<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C2601	1-104-664-11	ELECT	47μF	20%	25V
C2602	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C2603	1-104-664-11	ELECT	47μF	20%	25V
C2604	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2607	1-163-275-11	CERAMIC CHIP	0.001μF	5%	50V
C2608	1-104-664-11	ELECT	47μF	20%	25V
C2609	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2610	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2611	1-104-664-11	ELECT	47μF	20%	25V
C2612	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2613	1-104-664-11	ELECT	47μF	20%	25V
C2615	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2616	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2617	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2618	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2619	1-164-690-91	CERAMIC CHIP	0.0022μF	5%	50V
C2620	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2621	1-104-664-11	ELECT	47μF	20%	25V
C2622	1-104-664-11	ELECT	47μF	20%	25V
C2623	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2624	1-164-161-11	CERAMIC CHIP	0.0022μF	10%	50V
C2625	1-104-664-11	ELECT	47μF	20%	25V
C2626	1-115-339-11	CERAMIC CHIP	0.1μF	10%	50V
C2627	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2628	1-104-664-11	ELECT	47μF	20%	25V
C2631	1-163-275-11	CERAMIC CHIP	0.001μF	5%	50V
C2633	1-115-339-11	CERAMIC CHIP	0.1μF	10%	50V
C2635	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2636	1-104-664-11	ELECT	47μF	20%	25V
C2637	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C2639	1-104-664-11	ELECT	47μF	20%	25V
C2640	1-104-664-11	ELECT	47μF	20%	25V
C2641	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2643	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2644	1-164-690-91	CERAMIC CHIP	0.0022μF	5%	50V
C2645	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2647	1-104-664-11	ELECT	47μF	20%	25V
C2648	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2649	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2650	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2651	1-104-664-11	ELECT	47μF	20%	25V
C2652	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2655	1-163-275-11	CERAMIC CHIP	0.001μF	5%	50V
C2656	1-104-664-11	ELECT	47μF	20%	25V
C2658	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2659	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2660	1-104-664-11	ELECT	47μF	20%	25V
C2661	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C2662	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2663	1-104-664-11	ELECT	47μF	20%	25V
C2666	1-163-038-91	CERAMIC CHIP	0.1μF		25V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C2667	1-164-690-91	CERAMIC CHIP	0.0022μF	5%	50V
C2668	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2670	1-104-664-11	ELECT	47μF	20%	25V
C2673	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2674	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2675	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2678	1-163-275-11	CERAMIC CHIP	0.001μF	5%	50V
C2679	1-104-664-11	ELECT	47μF	20%	25V
C2680	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2681	1-104-664-11	ELECT	47μF	20%	25V
C2683	1-104-664-11	ELECT	47μF	20%	25V
C2685	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2686	1-164-690-91	CERAMIC CHIP	0.0022μF	5%	50V
C2689	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2690	1-126-967-11	ELECT	47μF	20%	50V
C2691	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2692	1-126-967-11	ELECT	47μF	20%	50V
C2693	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2694	1-104-664-11	ELECT	47μF	20%	25V
C2695	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C2696	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2697	1-104-664-11	ELECT	47μF	20%	25V
C2698	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2699	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2700	1-163-001-11	CERAMIC CHIP	220pF	10%	50V
C2701	1-164-346-11	CERAMIC CHIP	1μF		16V
C2705	1-163-275-11	CERAMIC CHIP	0.001μF	5%	50V
C2706	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2707	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2708	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2709	1-104-664-11	ELECT	47μF	20%	25V
C2710	1-126-935-11	ELECT	470μF	20%	6.3V
C2711	1-126-935-11	ELECT	470μF	20%	6.3V
C2713	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2714	1-104-664-11	ELECT	47μF	20%	25V
C2715	1-164-690-91	CERAMIC CHIP	0.0022μF	5%	50V
C2716	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2717	1-104-664-11	ELECT	47μF	20%	25V
C2718	1-164-346-11	CERAMIC CHIP	1μF		16V
C2719	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C2720	1-104-664-11	ELECT	47μF	20%	25V
C2721	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C2724	1-163-275-11	CERAMIC CHIP	0.001μF	5%	50V
C2725	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2726	1-126-964-11	ELECT	10μF	20%	50V
C2727	1-164-346-11	CERAMIC CHIP	1μF		16V
C2728	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V
C2729	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V
C2730	1-104-664-11	ELECT	47μF	20%	25V
C2731	1-164-346-11	CERAMIC CHIP	1μF		16V
C2733	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2737	1-164-690-91	CERAMIC CHIP	0.0022μF	5%	50V
C2738	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2739	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2740	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2741	1-163-237-11	CERAMIC CHIP	27pF	5%	50V
C2742	1-163-231-11	CERAMIC CHIP	15pF	5%	50V
C2744	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2745	1-104-664-11	ELECT	47μF	20%	25V
C2746	1-104-664-11	ELECT	47μF	20%	25V
C2747	1-104-664-11	ELECT	47μF	20%	25V
C2748	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C2749	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2750	1-126-935-11	ELECT	470μF	20%	6.3V
C2751	1-126-935-11	ELECT	470μF	20%	6.3V
C2753	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2754	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2755	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2756	1-104-664-11	ELECT	47μF	20%	25V
C2757	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2758	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2759	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2760	1-163-235-11	CERAMIC CHIP	22pF	5%	50V
C2761	1-163-263-11	CERAMIC CHIP	330pF	5%	50V
C2762	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C2763	1-104-664-11	ELECT	47μF	20%	16V
C2764	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2765	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C2766	1-163-016-00	CERAMIC CHIP	0.0039μF	10%	50V
C2767	1-163-016-00	CERAMIC CHIP	0.0039μF	10%	50V
C2768	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2769	1-104-664-11	ELECT	47μF	20%	16V
C2770	1-163-263-11	CERAMIC CHIP	330pF	5%	50V
C2771	1-163-016-00	CERAMIC CHIP	0.0039μF	10%	50V
C2772	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2773	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2774	1-163-016-00	CERAMIC CHIP	0.0039μF	10%	50V
C2775	1-104-664-11	ELECT	47μF	20%	16V
C2776	1-104-664-11	ELECT	47μF	20%	16V
C2777	1-163-263-11	CERAMIC CHIP	330pF	5%	50V
C2778	1-163-263-11	CERAMIC CHIP	330pF	5%	50V
C2779	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C2780	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C2781	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C2782	1-163-038-91	CERAMIC CHIP	0.1μF		25V

<CONNECTOR>

CN2601 *	1-564-522-11	PLUG, CONNECTOR 7P
CN2602	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P
CN2603 *	1-564-511-11	PLUG, CONNECTOR 8P
CN2604	1-695-915-11	TAB (CONTACT)

<DIODE>

D2601	8-719-988-61	DIODE 1SS355TE-17
D2602	8-719-988-61	DIODE 1SS355TE-17
D2603	8-719-988-61	DIODE 1SS355TE-17
D2604	8-719-988-61	DIODE 1SS355TE-17
D2605	8-719-976-99	DIODE DTZ5.1B
D2606	8-719-988-61	DIODE 1SS355TE-17
D2607	8-719-158-49	DIODE RD12SB2

BD

REF.NO.	PART NO.	DESCRIPTION	REMARK
D2608	8-719-976-99	DIODE DTZ5.1B	
D2609	8-719-988-61	DIODE 1SS355TE-17	
D2610	8-719-988-61	DIODE 1SS355TE-17	
D2611	8-719-988-61	DIODE 1SS355TE-17	
D2612	8-719-976-99	DIODE DTZ5.1B	
D2613	8-719-158-49	DIODE RD12SB2	
D2614	8-719-976-99	DIODE DTZ5.1B	
D2615	8-719-988-61	DIODE 1SS355TE-17	
D2616	8-719-976-99	DIODE DTZ5.1B	
D2617	8-719-158-49	DIODE RD12SB2	
D2618	8-719-976-99	DIODE DTZ5.1B	
D2619	8-719-988-61	DIODE 1SS355TE-17	
D2620	8-719-158-49	DIODE RD12SB2	
D2621	8-719-976-99	DIODE DTZ5.1B	
D2622	8-719-976-99	DIODE DTZ5.1B	
D2623	8-719-988-61	DIODE 1SS355TE-17	
D2624	8-719-988-61	DIODE 1SS355TE-17	
	<FERRITBEAD>		
FB2601	1-216-295-91	SHORT 0	
FB2602	1-216-295-91	SHORT 0	
FB2603	1-216-295-91	SHORT 0	
FB2604	1-216-295-91	SHORT 0	
	<IC>		
IC2601	8-759-106-02	IC µPC4570G2	
IC2602	8-759-998-22	IC PCM56P	
IC2603	8-759-106-02	IC µPC4570G2	
IC2604	8-759-998-22	IC PCM56P	
IC2605	8-759-589-66	IC CM0006CF	
IC2606	8-759-485-79	IC TC7SET08FU(TE85)	
IC2607	8-759-925-85	IC SN74HC32ANS	
IC2608	8-759-106-02	IC µPC4570G2	
IC2609	8-759-998-22	IC PCM56P	
IC2610	8-759-106-02	IC µPC4570G2	
IC2611	8-759-488-29	IC TC7W66FU(TE12R)	
IC2612	8-759-669-75	IC TLC2932IPWR	
IC2613	8-759-925-90	IC SN74HC74ANS	
IC2614	8-759-998-22	IC PCM56P	
IC2615	8-759-485-79	IC TC7SET08FU(TE85)	
IC2616	8-759-106-02	IC µPC4570G2	
IC2617	8-759-352-91	IC PST9143NL	
IC2618	8-759-038-15	IC MC74HC4538AF	
IC2619	8-752-916-83	IC CXP86324-028Q	
IC2620	8-759-367-69	IC MC74HC74AFEL	
IC2621	8-759-564-06	IC M24C32-MN6T	
IC2622	8-759-106-02	IC µPC4570G2	
IC2623	8-759-998-22	IC PCM56P	
IC2625	8-759-998-22	IC PCM56P	
IC2626	8-759-394-80	IC NJM2058M-TE2	
IC2627	8-759-394-80	IC NJM2058M-TE2	
	<CHIP CONDUCTOR>		
JR2605	1-216-295-91	SHORT 0	
	<COIL>		
L2601	1-414-234-22	INDUCTOR CHIP	0µH
L2602	1-414-234-22	INDUCTOR CHIP	0µH
L2605	1-469-555-21	INDUCTOR	10µH
L2606	1-414-234-22	INDUCTOR CHIP	0µH
L2608	1-469-555-21	INDUCTOR	10µH
L2609	1-414-234-22	INDUCTOR CHIP	0µH
L2610	1-414-234-22	INDUCTOR CHIP	0µH
L2611	1-412-029-11	INDUCTOR CHIP	10µH
L2612	1-414-234-22	INDUCTOR CHIP	0µH
L2615	1-414-234-22	INDUCTOR CHIP	0µH
L2616	1-414-234-22	INDUCTOR CHIP	0µH
L2617	1-469-555-21	INDUCTOR	10µH
L2618	1-469-555-21	INDUCTOR	10µH
L2619	1-414-234-22	INDUCTOR CHIP	0µH
L2621	1-414-234-22	INDUCTOR CHIP	0µH
L2622	1-414-234-22	INDUCTOR CHIP	0µH
L2625	1-414-234-22	INDUCTOR CHIP	0µH
L2626	1-469-555-21	INDUCTOR	10µH
L2627	1-414-234-22	INDUCTOR CHIP	0µH
L2628	1-469-555-21	INDUCTOR	10µH
L2629	1-414-234-22	INDUCTOR CHIP	0µH
L2633	1-412-029-11	INDUCTOR CHIP	10µH
L2634	1-414-234-22	INDUCTOR CHIP	0µH
L2635	1-414-234-22	INDUCTOR CHIP	0µH
L2636	1-469-555-21	INDUCTOR	10µH
L2637	1-414-234-22	INDUCTOR CHIP	0µH
L2638	1-414-234-22	INDUCTOR CHIP	0µH
L2639	1-469-555-21	INDUCTOR	10µH
L2640	1-414-234-22	INDUCTOR CHIP	0µH
L2643	1-414-234-22	INDUCTOR CHIP	0µH
L2645	1-469-555-21	INDUCTOR	10µH
L2646	1-414-234-22	INDUCTOR CHIP	0µH
L2647	1-414-234-22	INDUCTOR CHIP	0µH
L2648	1-469-555-21	INDUCTOR	10µH
L2649	1-412-029-11	INDUCTOR CHIP	10µH
L2652	1-414-234-22	INDUCTOR CHIP	0µH
L2653	1-469-555-21	INDUCTOR	10µH
L2654	1-414-234-22	INDUCTOR CHIP	0µH
L2656	1-469-555-21	INDUCTOR	10µH
L2657	1-414-234-22	INDUCTOR CHIP	0µH
L2658	1-414-234-22	INDUCTOR CHIP	0µH
L2659	1-414-234-22	INDUCTOR CHIP	0µH
L2661	1-414-234-22	INDUCTOR CHIP	0µH
L2663	1-414-234-22	INDUCTOR CHIP	0µH
L2664	1-414-234-22	INDUCTOR CHIP	0µH
L2665	1-216-295-91	SHORT 0	
L2666	1-216-295-91	SHORT 0	
L2667	1-216-295-91	SHORT 0	
L2668	1-216-295-91	SHORT 0	
L2669	1-216-295-91	SHORT 0	

REF.NO.	PART NO.	DESCRIPTION				REMARK
L2670	1-216-295-91	SHORT	0			
	<TRANSISTOR>					
Q2601	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q2602	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R			
Q2603	1-801-806-11	TRANSISTOR	DTC144EKA			
Q2604	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R			
Q2605	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q2606	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q2607	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R			
Q2608	1-801-806-11	TRANSISTOR	DTC144EKA			
Q2610	1-801-806-11	TRANSISTOR	DTC144EKA			
Q2611	1-801-806-11	TRANSISTOR	DTC144EKA			
Q2612	1-801-806-11	TRANSISTOR	DTC144EKA			
Q2613	1-801-806-11	TRANSISTOR	DTC144EKA			
Q2614	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
	<RESISTOR>					
R2601	1-208-782-11	METAL CHIP	1K	0.5%	1/10W	
R2602	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W	
R2603	1-208-782-11	METAL CHIP	1K	0.5%	1/10W	
R2606	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W	
R2607	1-216-295-91	SHORT	0			
R2608	1-216-295-91	SHORT	0			
R2609	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2610	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2611	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2612	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2613	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2621	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2622	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2623	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2624	1-216-081-00	RES-CHIP	22K	5%	1/10W	
R2625	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2628	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R2629	1-208-782-11	METAL CHIP	1K	0.5%	1/10W	
R2630	1-208-816-11	METAL CHIP	27K	0.5%	1/10W	
R2631	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
R2632	1-208-782-11	METAL CHIP	1K	0.5%	1/10W	
R2634	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R2635	1-208-802-11	METAL CHIP	6.8K	0.5%	1/10W	
R2636	1-216-295-91	SHORT	0			
R2637	1-216-071-00	RES-CHIP	8.2K	5%	1/10W	
R2638	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R2639	1-208-801-11	METAL CHIP	6.2K	0.5%	1/10W	
R2640	1-216-033-00	RES-CHIP	220	5%	1/10W	
R2641	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W	
R2643	1-216-033-00	RES-CHIP	220	5%	1/10W	
R2644	1-216-071-00	RES-CHIP	8.2K	5%	1/10W	
R2645	1-216-033-00	RES-CHIP	220	5%	1/10W	
R2646	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W	
R2647	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2648	1-216-295-91	SHORT	0			
R2649	1-216-295-91	SHORT	0			
R2650	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2651	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2652	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2653	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2654	1-216-071-00	RES-CHIP	8.2K	5%	1/10W	
R2655	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2657	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2658	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2659	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2661	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	
R2662	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2663	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2664	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R2665	1-208-782-11	METAL CHIP	1K	0.5%	1/10W	
R2666	1-216-033-00	RES-CHIP	220	5%	1/10W	
R2667	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R2668	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R2669	1-208-782-11	METAL CHIP	1K	0.5%	1/10W	
R2671	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2672	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2673	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R2674	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R2675	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R2676	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R2677	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R2678	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2679	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2680	1-216-033-00	RES-CHIP	220	5%	1/10W	
R2681	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2682	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2683	1-216-073-00	RES-CHIP	10K	5%	1/10W	
R2684	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W	
R2685	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	
R2688	1-216-037-00	RES-CHIP	330	5%	1/10W	
R2689	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	
R2690	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W	
R2691	1-216-295-91	SHORT	0			
R2692	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
R2693	1-216-295-91	SHORT	0			
R2694	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	
R2695	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
R2698	1-216-037-00	RES-CHIP	330	5%	1/10W	
R2699	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	
R2701	1-216-041-00	RES-CHIP	470	5%	1/10W	
R2703	1-216-037-00	RES-CHIP	330	5%	1/10W	
R2704	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R2705	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	
R2706	1-208-782-11	METAL CHIP	1K	0.5%	1/10W	
R2707	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
R2708	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R2709	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2710	1-216-025-91	RES-CHIP	100	5%	1/10W	
R2712	1-208-782-11	METAL CHIP	1K	0.5%	1/10W	
R2714	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
R2715	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R2716	1-216-025-91	RES-CHIP	100	5%	1/10W	

BD

REF.NO.	PART NO.	DESCRIPTION			REMARK
R2717	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W
R2719	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W
R2720	1-216-295-91	SHORT	0		
R2721	1-216-295-91	SHORT	0		
R2723	1-208-793-11	METAL CHIP	3K	0.5%	1/10W
R2725	1-208-776-11	METAL CHIP	560	0.5%	1/10W
R2726	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R2728	1-216-025-91	RES-CHIP	100	5%	1/10W
R2729	1-216-033-00	RES-CHIP	220	5%	1/10W
R2730	1-216-025-91	RES-CHIP	100	5%	1/10W
R2731	1-208-850-11	METAL CHIP	680K	0.5%	1/10W
R2732	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R2733	1-216-025-91	RES-CHIP	100	5%	1/10W
R2734	1-216-025-91	RES-CHIP	100	5%	1/10W
R2735	1-216-025-91	RES-CHIP	100	5%	1/10W
R2736	1-216-025-91	RES-CHIP	100	5%	1/10W
R2737	1-216-025-91	RES-CHIP	100	5%	1/10W
R2738	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2739	1-216-025-91	RES-CHIP	100	5%	1/10W
R2740	1-216-025-91	RES-CHIP	100	5%	1/10W
R2741	1-216-033-00	RES-CHIP	220	5%	1/10W
R2742	1-216-025-91	RES-CHIP	100	5%	1/10W
R2743	1-216-025-91	RES-CHIP	100	5%	1/10W
R2744	1-216-025-91	RES-CHIP	100	5%	1/10W
R2745	1-216-025-91	RES-CHIP	100	5%	1/10W
R2746	1-208-850-11	METAL CHIP	680K	0.5%	1/10W
R2747	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R2750	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W
R2751	1-216-025-91	RES-CHIP	100	5%	1/10W
R2752	1-216-025-91	RES-CHIP	100	5%	1/10W
R2753	1-216-025-91	RES-CHIP	100	5%	1/10W
R2755	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2756	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2758	1-216-025-91	RES-CHIP	100	5%	1/10W
R2759	1-216-033-00	RES-CHIP	220	5%	1/10W
R2760	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W
R2761	1-216-295-91	SHORT	0		
R2762	1-216-295-91	SHORT	0		
R2763	1-216-025-91	RES-CHIP	100	5%	1/10W
R2764	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2765	1-216-025-91	RES-CHIP	100	5%	1/10W
R2766	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2767	1-216-033-00	RES-CHIP	220	5%	1/10W
R2768	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2769	1-216-025-91	RES-CHIP	100	5%	1/10W
R2771	1-216-033-00	RES-CHIP	220	5%	1/10W
R2773	1-216-025-91	RES-CHIP	100	5%	1/10W
R2774	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2775	1-216-025-91	RES-CHIP	100	5%	1/10W
R2777	1-216-025-91	RES-CHIP	100	5%	1/10W
R2778	1-216-025-91	RES-CHIP	100	5%	1/10W
R2779	1-216-025-91	RES-CHIP	100	5%	1/10W
R2781	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R2782	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2783	1-216-295-91	SHORT	0		
R2784	1-216-025-91	RES-CHIP	100	5%	1/10W
R2785	1-216-041-00	RES-CHIP	470	5%	1/10W
R2786	1-216-041-00	RES-CHIP	470	5%	1/10W
R2787	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R2789	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W
R2790	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R2791	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2792	1-216-033-00	RES-CHIP	220	5%	1/10W
R2793	1-216-033-00	RES-CHIP	220	5%	1/10W
R2794	1-216-025-91	RES-CHIP	100	5%	1/10W
R2796	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2797	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2799	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R2800	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2803	1-208-799-11	METAL CHIP	5.1K	0.5%	1/10W
R2804	1-216-295-91	SHORT	0		
R2805	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2806	1-216-025-91	RES-CHIP	100	5%	1/10W
R2807	1-216-295-91	SHORT	0		
R2808	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2809	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2810	1-216-025-91	RES-CHIP	100	5%	1/10W
R2811	1-216-025-91	RES-CHIP	100	5%	1/10W
R2812	1-216-025-91	RES-CHIP	100	5%	1/10W
R2813	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2814	1-216-025-91	RES-CHIP	100	5%	1/10W
R2815	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2818	1-216-025-91	RES-CHIP	100	5%	1/10W
R2821	1-216-025-91	RES-CHIP	100	5%	1/10W
R2823	1-216-033-00	RES-CHIP	220	5%	1/10W
R2824	1-216-033-00	RES-CHIP	220	5%	1/10W
R2825	1-216-033-00	RES-CHIP	220	5%	1/10W
R2826	1-216-033-00	RES-CHIP	220	5%	1/10W
R2827	1-216-033-00	RES-CHIP	220	5%	1/10W
R2831	1-216-025-91	RES-CHIP	100	5%	1/10W
R2832	1-216-025-91	RES-CHIP	100	5%	1/10W
R2834	1-216-025-91	RES-CHIP	100	5%	1/10W
R2835	1-216-025-91	RES-CHIP	100	5%	1/10W
R2836	1-216-118-00	RES-CHIP	750K	5%	1/10W
R2837	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2838	1-216-122-11	RES-CHIP	1.1M	5%	1/10W
R2839	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2840	1-216-025-91	RES-CHIP	100	5%	1/10W
R2841	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2842	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2843	1-216-295-91	SHORT	0		
R2844	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2845	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2846	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2847	1-216-025-91	RES-CHIP	100	5%	1/10W
R2848	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2849	1-216-025-91	RES-CHIP	100	5%	1/10W
R2850	1-216-124-11	RES-CHIP	1.3M	5%	1/10W
R2851	1-216-124-11	RES-CHIP	1.3M	5%	1/10W
R2852	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R2853	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2872	1-216-049-91	RES-CHIP	1K	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R2873	1-216-049-91	RES-CHIP	1K	5%	1/10W

<CRYSTAL>

REF.NO.	PART NO.	DESCRIPTION			REMARK
X2701	1-767-925-21	VIBRATOR, CRYSTAL (12MHz)			

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* A-1343-830-A DS BOARD, COMPLETE
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<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C3501	1-104-664-11	ELECT	47µF	20%	25V
C3502	1-104-664-11	ELECT	47µF	20%	25V
C3503	1-104-664-11	ELECT	47µF	20%	25V
C3504	1-104-664-11	ELECT	47µF	20%	25V
C3505	1-104-664-11	ELECT	47µF	20%	25V
C3506	1-163-275-11	CERAMIC CHIP	0.001µF	5%	50V
C3507	1-126-964-11	ELECT	10µF	20%	50V
C3508	1-107-714-11	ELECT	10µF	20%	16V
C3509	1-137-371-11	MYLAR	0.015µF	5%	50V
C3510	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C3511	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C3512	1-104-664-11	ELECT	47µF	20%	25V
C3513	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C3514	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C3515	1-104-664-11	ELECT	47µF	20%	25V
C3518	1-163-224-11	CERAMIC CHIP	7pF	0.25pF	50V
C3519	1-104-664-11	ELECT	47µF	20%	25V
C3520	1-137-374-11	MYLAR	0.047µF	5%	50V
C3523	1-163-243-11	CERAMIC CHIP	47pF	5%	50V
C3525	1-104-664-11	ELECT	47µF	20%	25V
C3526	1-104-664-11	ELECT	47µF	20%	25V
C3528	1-107-714-11	ELECT	10µF	20%	16V
C3529	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
CN3501	* 1-691-632-21	CONNECTOR, BOARD TO BOARD 15P			

<DIODE>

REF.NO.	PART NO.	DESCRIPTION			REMARK
D3501	8-719-158-15	DIODE RD5.6S-B			
D3502	8-719-914-44	DIODE DAP202K			
D3503	8-719-158-15	DIODE RD5.6S-B			

<IC>

REF.NO.	PART NO.	DESCRIPTION			REMARK
IC3502	8-759-251-31	IC CA0007AM			
IC3503	8-759-251-31	IC CA0007AM			
IC3504	8-759-251-31	IC CA0007AM			
IC3505	8-759-711-28	IC NJM2058D			
IC3506	8-759-100-96	IC µPC4558G2			

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
R3501	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3502	1-216-093-91	RES-CHIP	68K	5%	1/10W
R3503	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3504	1-216-689-11	RES-CHIP	39K	5%	1/10W
R3506	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R3507	1-216-689-11	RES-CHIP	39K	5%	1/10W
R3508	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3509	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3511	1-208-803-11	METAL CHIP	7.5K	0.5%	1/10W
R3512	1-216-033-00	RES-CHIP	220	5%	1/10W
R3513	1-216-033-00	RES-CHIP	220	5%	1/10W
R3514	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3515	1-216-033-00	RES-CHIP	220	5%	1/10W
R3518	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R3519	1-216-081-00	RES-CHIP	22K	5%	1/10W
R3520	1-216-081-00	RES-CHIP	22K	5%	1/10W
R3521	1-216-103-00	RES-CHIP	180K	5%	1/10W
R3523	1-216-099-00	RES-CHIP	120K	5%	1/10W
R3524	1-216-097-91	RES-CHIP	100K	5%	1/10W
R3526	1-216-039-00	RES-CHIP	390	5%	1/10W
R3529	1-216-107-00	RES-CHIP	270K	5%	1/10W
R3530	1-216-081-00	RES-CHIP	22K	5%	1/10W
R3531	1-216-041-00	RES-CHIP	470	5%	1/10W
R3532	1-216-037-00	RES-CHIP	330	5%	1/10W
R3533	1-216-075-00	RES-CHIP	12K	5%	1/10W
R3535	1-216-097-91	RES-CHIP	100K	5%	1/10W
R3537	1-216-081-00	RES-CHIP	22K	5%	1/10W
R3538	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3541	1-216-079-00	RES-CHIP	18K	5%	1/10W

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* A-1346-923-A D BOARD, COMPLETE (ES48)
* A-1346-924-A D BOARD, COMPLETE (ES53)
* A-1346-925-A D BOARD, COMPLETE (ES61)
* A-1346-937-A D BOARD, COMPLETE (ES43)
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REF.NO.	PART NO.	DESCRIPTION			REMARK
	1-500-048-11	FERRITE	0µH (Q5104)		
	4-363-414-00	SPACER, MICA (IC5302, Q5104)			
	4-382-854-11	SCREW (M3X10), P, SW (+) (D5107, D5108, IC5103, IC5104, IC5105, IC5106, IC5302, Q5104, Q5705)			
	* 4-393-506-01	RETAINER, TR (IC5302)			
	7-682-952-09	SCREW +PSW 3X16 (IC5501, IC5502)			

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C5001	1-104-664-11	ELECT	47µF	20%	16V
C5002	1-126-963-11	ELECT	4.7µF	20%	50V
C5011	1-126-934-11	ELECT	220µF	20%	16V
C5020	1-126-961-11	ELECT	2.2µF	20%	50V
C5102	1-102-973-00	CERAMIC	100pF	5%	50V
C5103	1-126-960-11	ELECT	1µF	20%	50V
C5104	1-137-415-11	MYLAR	0.0068µF	10%	100V
C5105	1-102-973-00	CERAMIC	100pF	5%	50V
C5112	1-162-117-00	CERAMIC	100pF	10%	500V
C5113	1-136-207-11	MYLAR	0.047µF	10%	250V
C5115	1-124-347-51	ELECT	100µF	20%	160V
C5117	1-162-116-00	CERAMIC	680pF	10%	2KV

D

REF.NO.	PART NO.	DESCRIPTION	REMARK
C5118	1-137-391-11	MYLAR 0.0047μF 5% 100V	
C5119	1-162-116-00	CERAMIC 680pF 10% 2KV	
C5120	1-162-116-00	CERAMIC 680pF 10% 2KV	
C5123	1-129-718-00	FILM 0.022μF 5% 630V	
C5127	1-117-643-11	FILM 9100pF 3% 1.2KV	
C5130	1-115-521-11	FILM 0.82μF 5% 250V	
C5133	1-104-665-11	ELECT 100μF 20% 25V	
C5135	1-164-161-11	CERAMIC CHIP 0.0022μF 10% 50V	
C5136	1-164-161-11	CERAMIC CHIP 0.0022μF 10% 50V	
C5137	1-137-043-11	MYLAR 0.0047μF 10% 400V	
C5138	1-126-965-11	ELECT 22μF 20% 50V	
C5141	1-136-189-00	MYLAR 0.1μF 10% 250V	
C5142	1-162-117-00	CERAMIC 100pF 10% 500V	
C5143	1-115-521-11	FILM 0.82μF 5% 250V	
C5145	1-104-665-11	ELECT 100μF 20% 25V	
C5146	1-107-655-11	ELECT 47μF 20% 250V	
C5147	1-102-228-00	CERAMIC 470pF 10% 500V	
C5148	1-126-941-11	ELECT 470μF 20% 25V	
C5149	1-126-941-11	ELECT 470μF 20% 25V	
C5150	1-164-161-11	CERAMIC CHIP 0.0022μF 10% 50V	
C5151	1-164-161-11	CERAMIC CHIP 0.0022μF 10% 50V	
C5152	1-126-972-11	ELECT 1000μF 20% 50V	
C5153	1-126-972-11	ELECT 1000μF 20% 50V	
C5158	1-124-347-51	ELECT 100μF 20% 160V	
C5159	1-126-935-11	ELECT 470μF 20% 16V	
C5160	1-126-935-11	ELECT 470μF 20% 16V	
C5163	1-164-161-11	CERAMIC CHIP 0.0022μF 10% 50V	
C5164	1-164-161-11	CERAMIC CHIP 0.0022μF 10% 50V	
C5165	1-126-967-11	ELECT 47μF 20% 50V	
C5166	1-107-909-11	ELECT 47μF 20% 50V	
C5167	1-126-967-11	ELECT 47μF 20% 50V	
C5168	1-107-909-11	ELECT 47μF 20% 50V	
C5170	1-163-037-11	CERAMIC CHIP 0.022μF 10% 50V	
C5171	1-106-387-00	MYLAR 0.068μF 10% 200V	
C5172	1-163-037-11	CERAMIC CHIP 0.022μF 10% 50V	
C5173	1-163-037-11	CERAMIC CHIP 0.022μF 10% 50V	
C5174	1-163-037-11	CERAMIC CHIP 0.022μF 10% 50V	
C5175	1-126-967-11	ELECT 47μF 20% 50V	
C5176	1-126-967-11	ELECT 47μF 20% 50V	
C5204	1-126-933-11	ELECT 100μF 20% 16V	
C5205	1-130-495-00	MYLAR 0.1μF 5% 50V	
C5206	1-126-960-11	ELECT 1μF 20% 50V	
C5207	1-126-965-11	ELECT 22μF 20% 50V	
C5208	1-163-037-11	CERAMIC CHIP 0.022μF 10% 50V	
C5209	1-163-275-11	CERAMIC CHIP 0.001μF 5% 50V	
C5211	1-130-495-00	MYLAR 0.1μF 5% 50V	
C5214	1-126-935-11	ELECT 470μF 20% 16V	
C5215	1-126-964-11	ELECT 10μF 20% 50V	
C5216	1-164-096-11	CERAMIC 0.01μF 50V	
C5217	1-164-096-11	CERAMIC 0.01μF 50V	
C5218	1-164-096-11	CERAMIC 0.01μF 50V	
C5219	1-164-096-11	CERAMIC 0.01μF 50V	
C5220	1-164-096-11	CERAMIC 0.01μF 50V	
C5221	1-164-096-11	CERAMIC 0.01μF 50V	
C5222	1-164-096-11	CERAMIC 0.01μF 50V	
C5223	1-126-960-11	ELECT 1μF 20% 50V	

REF.NO.	PART NO.	DESCRIPTION	REMARK
C5224	1-126-967-11	ELECT 47μF 20% 50V	
C5225	1-163-021-91	CERAMIC CHIP 0.01μF 10% 50V	
C5226	1-164-161-11	CERAMIC CHIP 0.0022μF 10% 50V	
C5301	1-104-664-11	ELECT 47μF 20% 25V	
C5302	1-104-665-11	ELECT 100μF 20% 25V	
C5303	1-126-933-11	ELECT 100μF 20% 16V	
C5304	1-163-005-11	CERAMIC CHIP 470pF 10% 50V	
C5305	1-137-399-11	MYLAR 0.1μF 5% 100V	
C5307	1-164-004-11	CERAMIC CHIP 0.1μF 10% 25V	
C5308	1-126-960-11	ELECT 1μF 20% 50V	
C5310	1-126-964-11	ELECT 10μF 20% 50V	
C5311	1-136-177-00	MYLAR 1μF 5% 50V	
C5312	1-163-021-91	CERAMIC CHIP 0.01μF 10% 50V	
C5313	1-126-933-11	ELECT 100μF 20% 16V	
C5314	1-126-969-11	ELECT 220μF 20% 50V	
C5315	1-126-964-11	ELECT 10μF 20% 50V	
C5316	1-137-401-11	MYLAR 0.22μF 10% 100V	
C5317	1-104-664-11	ELECT 47μF 20% 16V	
C5318	1-163-021-91	CERAMIC CHIP 0.01μF 10% 50V	
C5319	1-126-941-11	ELECT 470μF 20% 25V	
C5320	1-126-972-11	ELECT 1000μF 20% 50V	
C5321	1-163-243-11	CERAMIC CHIP 47pF 5% 50V	
C5323	1-163-021-91	CERAMIC CHIP 0.01μF 10% 50V	
C5326	1-126-972-11	ELECT 1000μF 20% 50V	
C5327	1-163-251-11	CERAMIC CHIP 100pF 5% 50V	
C5328	1-163-021-91	CERAMIC CHIP 0.01μF 10% 50V	
C5329	1-163-251-11	CERAMIC CHIP 100pF 5% 50V	
C5331	1-126-960-11	ELECT 1μF 20% 50V	
C5332	1-163-021-91	CERAMIC CHIP 0.01μF 10% 50V	
C5333	1-163-021-91	CERAMIC CHIP 0.01μF 10% 50V	
C5334	1-126-960-11	ELECT 1μF 20% 50V	
C5401	1-126-967-11	ELECT 47μF 20% 50V	
C5402	1-104-664-11	ELECT 47μF 20% 25V	
C5403	1-102-125-00	CERAMIC 0.0047μF 10% 50V	
C5404	1-102-125-00	CERAMIC 0.0047μF 10% 50V	
C5405	1-102-125-00	CERAMIC 0.0047μF 10% 50V	
C5406	1-104-664-11	ELECT 47μF 20% 25V	
C5407	1-130-495-00	MYLAR 0.1μF 5% 50V	
C5507	1-102-973-00	CERAMIC 100pF 5% 50V	
C5508	1-102-973-00	CERAMIC 100pF 5% 50V	
C5509	1-102-973-00	CERAMIC 100pF 5% 50V	
C5510	1-102-973-00	CERAMIC 100pF 5% 50V	
C5511	1-102-973-00	CERAMIC 100pF 5% 50V	
C5512	1-102-973-00	CERAMIC 100pF 5% 50V	
C5517	1-126-965-11	ELECT 22μF 20% 50V	
C5518	1-126-965-11	ELECT 22μF 20% 50V	
C5519	1-126-969-11	ELECT 220μF 20% 50V	
C5520	1-126-969-11	ELECT 220μF 20% 50V	
C5521	1-130-495-00	MYLAR 0.1μF 5% 50V	
C5522	1-130-495-00	MYLAR 0.1μF 5% 50V	
C5523	1-126-971-11	ELECT 470μF 20% 50V	
C5524	1-126-971-11	ELECT 470μF 20% 50V	
C5527	1-126-969-11	ELECT 220μF 20% 50V	
C5528	1-126-969-11	ELECT 220μF 20% 50V	
C5529	1-137-150-11	MYLAR 0.01μF 5% 50V	
C5530	1-137-150-11	MYLAR 0.01μF 5% 50V	

REF.NO.	PART NO.	DESCRIPTION	REMARK
C5711	1-136-165-00	MYLAR 0.1μF 5%	50V
C5712	1-136-177-00	MYLAR 1μF 5%	50V
C5713	1-104-665-11	ELECT 100μF 20%	25V
C5714	1-130-471-00	MYLAR 0.001μF 5%	50V
C5715	1-137-150-11	MYLAR 0.01μF 5%	50V
C5716	1-104-665-11	ELECT 100μF 20%	25V
C5717	1-126-968-11	ELECT 100μF 20%	50V
C5718	1-162-114-00	CERAMIC 0.0047μF	2KV
C5719	1-126-968-11	ELECT 100μF 20%	50V
C5720	1-137-372-11	MYLAR 0.022μF 5%	50V
C5721	1-104-661-91	ELECT 330μF 20%	16V
C5722	1-126-934-11	ELECT 220μF 20%	16V
C5727	1-163-021-91	CERAMIC CHIP 0.01μF 10%	50V
C5728	1-163-021-91	CERAMIC CHIP 0.01μF 10%	50V
C5759	1-126-964-11	ELECT 10μF 20%	50V
C5760	1-164-182-11	CERAMIC CHIP 0.0033μF 10%	50V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN5001	* 1-564-506-11	PLUG, CONNECTOR 3P	
CN5002	* 1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P	
CN5003	* 1-506-371-00	PIN, CONNECTOR 2P	
CN5004	1-695-915-11	TAB (CONTACT)	
CN5006	* 1-564-512-11	PLUG, CONNECTOR 9P	
CN5007	* 1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
CN5008	* 1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
CN5009	* 1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
CN5010	* 1-564-507-11	PLUG, CONNECTOR 4P	
CN5011	* 1-564-507-11	PLUG, CONNECTOR 4P	
CN5012	* 1-564-507-11	PLUG, CONNECTOR 4P	
CN5013	* 1-764-333-11	PLUG, CONNECTOR 10P	
CN5014	* 1-691-135-11	PIN, CONNECTOR (PC BOARD) 4P	
CN5015	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P	
CN5016	1-900-903-64	CONNECTOR ASSY 20P	
CN5017	1-900-903-64	CONNECTOR ASSY 20P	
CN5018	* 1-564-511-11	PLUG, CONNECTOR 8P	
CN5019	* 1-564-507-11	PLUG, CONNECTOR 4P	
CN5020	* 1-564-506-11	PLUG, CONNECTOR 3P	
CN5402	* 1-691-616-21	CONNECTOR, BOARD TO BOARD 15P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D5001	8-719-991-33	DIODE 1SS133T-77	
D5002	8-719-991-33	DIODE 1SS133T-77	
D5006	8-719-991-33	DIODE 1SS133T-77	
D5008	8-719-991-33	DIODE 1SS133T-77	
D5101	8-719-983-38	DIODE MTZJ-T-77-36B	
D5107	8-719-979-99	DIODE ERD08M-15	
D5108	8-719-052-09	DIODE FMG-36S-LF024-104	
D5114	8-719-971-20	DIODE ERC38-06	
D5115	8-719-302-43	DIODE EL1Z	
D5116	8-719-979-85	DIODE EGP20G	
D5117	8-719-302-43	DIODE EL1Z	
D5118	8-719-979-85	DIODE EGP20G	
D5121	8-719-979-85	DIODE EGP20G	
D5122	8-719-979-85	DIODE EGP20G	
D5201	8-719-991-33	DIODE 1SS133T-77	
D5202	8-719-109-85	DIODE RD5.1ESB2	
D5203	8-719-923-86	DIODE MTZJ-T-77-15	
D5204	8-719-921-63	DIODE MTZJ-7.5B	
D5205	8-719-991-33	DIODE 1SS133T-77	
D5207	8-719-991-33	DIODE 1SS133T-77	
D5208	8-719-991-33	DIODE 1SS133T-77	
D5301	8-719-923-86	DIODE MTZJ-T-77-15	
D5302	8-719-991-33	DIODE 1SS133T-77	
D5303	8-719-908-03	DIODE GP08D	
D5304	8-719-908-03	DIODE GP08D	
D5305	8-719-991-33	DIODE 1SS133T-77	
D5306	8-719-923-86	DIODE MTZJ-T-77-15	
D5307	8-719-923-86	DIODE MTZJ-T-77-15	
D5308	8-719-924-16	DIODE MTZJ-T-77-24	
D5309	8-719-924-16	DIODE MTZJ-T-77-24	
D5401	8-719-110-17	DIODERD10ESB2	
D5402	8-719-982-96	DIODE MTZJ-T-77-2.2A	
D5701	8-719-991-33	DIODE 1SS133T-77	
D5704	8-719-991-33	DIODE 1SS133T-77	
D5719	8-719-923-86	DIODE MTZJ-T-77-15	
D5721	8-719-923-86	DIODE MTZJ-T-77-15	
D5724	8-719-018-82	DIODE RGP02-20EL-6394	
D5726	8-719-991-33	DIODE 1SS133T-77	
D5727	8-719-991-33	DIODE 1SS133T-77	
D5732	8-719-991-33	DIODE 1SS133T-77	

<FERRITBEAD>

REF.NO.	PART NO.	DESCRIPTION	REMARK
FB5102	1-412-911-11	FERRITE 0μH	
FB5103	1-412-911-11	FERRITE 0μH	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC5103	8-759-701-79	IC NJM7812FA	
IC5104	8-759-929-65	IC LM7912CT	
IC5105	8-759-701-56	IC NJM78M05FA	
IC5106	8-759-701-84	IC NJM7905FA	
IC5107	8-759-701-59	IC NJM78M09FA	
IC5201	8-759-085-67	IC LM339NS	
IC5301	8-759-251-31	IC CA0007AM	
IC5302	8-759-192-71	IC STV9379	
IC5303	8-759-998-98	IC LM358D	
IC5401	8-759-711-28	IC NJM2058D	
IC5501	8-749-014-67	IC STK392-020	
IC5502	8-749-014-67	IC STK392-020	
IC5703	8-759-711-28	IC NJM2058D	

<CHIP CONDUCTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
JR5301	1-216-295-91	SHORT 0	
JR5303	1-216-295-91	SHORT 0	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L5101	1-406-665-11	INDUCTOR 100μH	
L5105	1-459-111-00	INDUCTOR 10mH	
L5107	1-412-533-21	INDUCTOR 47μH	

REF.NO.	PART NO.	DESCRIPTION		REMARK
L5108	1-412-533-21	INDUCTOR	47μH	
L5109	1-412-519-11	INDUCTOR	3.3μH	
L5201	1-414-187-11	INDUCTOR	47μH	
L5301	1-412-524-11	INDUCTOR	8.2μH	
L5501	1-412-533-21	INDUCTOR	47μH	
L5502	1-412-533-21	INDUCTOR	47μH	
L5503	1-412-533-21	INDUCTOR	47μH	
L5504	1-412-533-21	INDUCTOR	47μH	
	<NEON LAMP>			
NL5101	1-517-778-21	LAMP, NEON		
NL5102	1-517-778-21	LAMP, NEON		
NL5103	1-517-778-21	LAMP, NEON		
NL5402	1-517-778-21	LAMP, NEON		
	<IC LINK>			
PS5101 ⚠	1-533-590-31	LINK, IC (1A/90V AC, 60V DC)		
PS5501 ⚠	1-533-597-31	LINK, IC (5A/90V AC, 60V DC)		
PS5502 ⚠	1-533-597-31	LINK, IC (5A/90V AC, 60V DC)		
PS5503 ⚠	1-533-597-31	LINK, IC (5A/90V AC, 60V DC)		
PS5504 ⚠	1-533-597-31	LINK, IC (5A/90V AC, 60V DC)		
PS5539 ⚠	1-533-595-31	LINK, IC (3.15A/90V AC, 60V DC)		
PS5540 ⚠	1-533-595-31	LINK, IC (3.15A/90V AC, 60V DC)		
PS5543 ⚠	1-533-595-31	LINK, IC (3.15A/90V AC, 60V DC)		
PS5544 ⚠	1-533-595-31	LINK, IC (3.15A/90V AC, 60V DC)		
PS5549 ⚠	1-533-595-31	LINK, IC (3.15A/90V AC, 60V DC)		
PS5550 ⚠	1-533-595-31	LINK, IC (3.15A/90V AC, 60V DC)		
	<TRANSISTOR>			
Q5006	1-801-806-11	TRANSISTOR	DTC144EKA	
Q5009	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R	
Q5102	8-729-119-80	TRANSISTOR	2SC2688-LK	
Q5104	8-729-051-81	TRANSISTOR	2SC5047-YB	
Q5105	8-729-038-83	TRANSISTOR	2SK2251-01-F19	
Q5106	8-729-119-76	TRANSISTOR	2SA1175-HFE	
Q5201	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q5302	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R	
Q5303	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q5401	8-729-422-27	TRANSISTOR	2SD601A-Q	
Q5402	8-729-216-22	TRANSISTOR	2SA1162-G	
Q5403	1-801-806-11	TRANSISTOR	DTC144EKA	
Q5501	8-729-423-33	TRANSISTOR	2SC3311A-QRSTA	
Q5502	8-729-423-33	TRANSISTOR	2SC3311A-QRSTA	
Q5503	8-729-119-76	TRANSISTOR	2SA1175-HFE	
Q5504	8-729-423-33	TRANSISTOR	2SC3311A-QRSTA	
Q5505	8-729-119-76	TRANSISTOR	2SA1175-HFE	
Q5506	8-729-423-33	TRANSISTOR	2SC3311A-QRSTA	
Q5704	8-729-423-33	TRANSISTOR	2SC3311A-QRSTA	
Q5705	8-729-053-73	TRANSISTOR	2SC5022	
Q5706	8-729-119-76	TRANSISTOR	2SA1175-HFE	
Q5707	8-729-823-81	TRANSISTOR	2SC4632LS-CB7	
Q5710	8-729-026-49	TRANSISTOR	2SA1037AK-T-146-R	
Q5711	8-729-120-28	TRANSISTOR	2SC1623-L5L6	

REF.NO.	PART NO.	DESCRIPTION			REMARK
	<RESISTOR>				
R5004	1-216-089-91	RES-CHIP	47K	5%	1/10W
R5013	1-216-089-91	RES-CHIP	47K	5%	1/10W
R5023	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R5048	1-216-041-00	RES-CHIP	470	5%	1/10W
R5101	1-215-926-00	METAL OXIDE	33K	5%	3W
R5112	1-247-843-11	CARBON	3.3K	5%	1/4W
R5115	1-216-435-11	METAL OXIDE	2.7K	5%	1W
R5119	1-215-922-11	METAL OXIDE	6.8K	5%	3W
R5120	1-216-486-00	METAL OXIDE	8.2K	5%	3W
R5122	1-215-905-11	METAL OXIDE	10	5%	3W
R5136	1-215-443-00	METAL	8.2K	1%	1/4W
R5138	1-215-457-00	METAL	33K	1%	1/4W
R5139	1-216-391-11	METAL OXIDE	1.5	5%	3W
R5140	1-215-449-00	METAL	15K	1%	1/4W
R5141	1-215-911-11	METAL OXIDE	100	5%	3W
R5146	1-215-910-00	METAL OXIDE	68	5%	3W
R5147	1-215-910-00	METAL OXIDE	68	5%	3W
R5148	1-249-377-11	CARBON	0.47	5%	1/4W
R5149	1-247-807-31	CARBON	100	5%	1/4W
R5152	1-216-377-11	METAL OXIDE	4.7	5%	2W
R5153	1-249-379-11	CARBON	0.68	5%	1/4W
R5154	1-260-127-11	CARBON	220K	5%	1/2W
R5155	1-214-909-00	METAL	68K	1%	1/2W
R5157	1-215-908-00	METAL OXIDE	33	5%	3W (ES43,ES48)
R5157	1-216-474-11	METAL OXIDE	33	5%	3W (ES53)
R5157	1-216-472-00	METAL OXIDE	33	5%	3W (ES61)
R5158	1-216-349-00	METAL OXIDE	1	5%	1W
R5159	1-215-908-00	METAL OXIDE	33	5%	3W (ES43,ES48)
R5159	1-216-474-11	METAL OXIDE	33	5%	3W (ES53)
R5159	1-216-472-00	METAL OXIDE	33	5%	3W (ES61)
R5160	1-249-377-11	CARBON	0.47	5%	1/4W
R5161	1-249-377-11	CARBON	0.47	5%	1/4W
R5162	1-216-393-00	METAL OXIDE	2.2	5%	3W
R5163	1-216-392-11	METAL OXIDE	1.8	5%	3W
R5164	1-249-393-11	CARBON	10	5%	1/4W
R5166	1-215-905-11	METAL OXIDE	10	5%	3W
R5169	1-249-424-11	CARBON	3.9K	5%	1/4W
R5171	1-249-429-11	CARBON	10K	5%	1/4W
R5172	1-249-417-11	CARBON	1K	5%	1/4W
R5173	1-215-905-11	METAL OXIDE	10	5%	3W
R5174	1-215-905-11	METAL OXIDE	10	5%	3W
R5175	1-215-905-11	METAL OXIDE	10	5%	3W
R5201	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R5202	1-216-049-91	RES-CHIP	1K	5%	1/10W
R5203	1-215-879-11	METAL OXIDE	47K	5%	1W
R5204	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R5205	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R5206	1-208-837-11	METAL CHIP	200K	0.5%	1/10W
R5209	1-208-760-11	METAL CHIP	120	0.5%	1/10W
R5210	1-216-113-00	RES-CHIP	470K	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R5211	1-216-081-00	RES-CHIP	22K	5%	1/10W
R5212	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R5213	1-216-089-91	RES-CHIP	47K	5%	1/10W
R5214	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5215	1-216-089-91	RES-CHIP	47K	5%	1/10W
R5216	1-247-895-91	CARBON	470K	5%	1/4W
R5217	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R5218	1-216-049-91	RES-CHIP	1K	5%	1/10W
R5219	1-216-075-00	RES-CHIP	12K	5%	1/10W
R5220	1-216-105-91	RES-CHIP	220K	5%	1/10W
R5221	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R5222	1-216-105-91	RES-CHIP	220K	5%	1/10W
R5223	1-216-081-00	RES-CHIP	22K	5%	1/10W
R5224	1-249-405-11	CARBON	100	5%	1/4W
R5225	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R5226	1-216-089-91	RES-CHIP	47K	5%	1/10W
R5227	1-260-135-11	CARBON	1M	5%	1/2W
R5229	1-216-045-00	RES-CHIP	680	5%	1/10W
R5230	1-216-097-91	RES-CHIP	100K	5%	1/10W
R5231	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R5232	1-216-089-91	RES-CHIP	47K	5%	1/10W
R5233	1-247-807-31	CARBON	100	5%	1/4W
R5234	1-216-049-91	RES-CHIP	1K	5%	1/10W
R5235	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R5236	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R5302	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5303	1-216-083-00	RES-CHIP	27K	5%	1/10W
R5304	1-216-081-00	RES-CHIP	22K	5%	1/10W
R5305	1-208-801-11	METAL CHIP	6.2K	0.5%	1/10W
R5306	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R5307	1-216-089-91	RES-CHIP	47K	5%	1/10W
R5308	1-216-353-00	METAL OXIDE	2.2	5%	1W
R5309	1-216-097-91	RES-CHIP	100K	5%	1/10W
R5310	1-216-353-00	METAL OXIDE	2.2	5%	1W
R5311	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5312	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5313	1-216-083-00	RES-CHIP	27K	5%	1/10W
R5314	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5315	1-215-913-11	METAL OXIDE	220	5%	3W
R5316	1-216-089-91	RES-CHIP	47K	5%	1/10W
R5317	1-216-049-91	RES-CHIP	1K	5%	1/10W
R5318	1-216-097-91	RES-CHIP	100K	5%	1/10W
R5319	1-216-085-00	RES-CHIP	33K	5%	1/10W
R5320	1-249-383-11	CARBON	1.5	5%	1/4W
R5321	1-216-089-91	RES-CHIP	47K	5%	1/10W
R5323	1-216-083-00	RES-CHIP	27K	5%	1/10W
R5325	1-208-801-11	METAL CHIP	6.2K	0.5%	1/10W
R5326	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R5328	1-216-089-91	RES-CHIP	47K	5%	1/10W
R5329	1-216-025-91	RES-CHIP	100	5%	1/10W
R5330	1-216-295-91	SHORT	0		
R5331	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5335	1-216-117-00	RES-CHIP	680K	5%	1/10W
R5337	1-216-117-00	RES-CHIP	680K	5%	1/10W
R5338	1-216-295-91	SHORT	0		
R5339	1-247-807-31	CARBON	100	5%	1/4W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R5340	1-249-377-11	CARBON	0.47	5%	1/4W
R5341	1-249-377-11	CARBON	0.47	5%	1/4W
R5344	1-216-117-00	RES-CHIP	680K	5%	1/10W
R5345	1-216-117-00	RES-CHIP	680K	5%	1/10W
R5401	1-216-295-91	SHORT	0		
R5405	1-260-087-11	CARBON	100	5%	1/2W
R5406	1-216-295-91	SHORT	0		
R5408	1-216-295-91	SHORT	0		
R5409	1-216-295-91	SHORT	0		
R5410	1-260-087-11	CARBON	100	5%	1/2W
R5411	1-216-295-91	SHORT	0		
R5412	1-208-812-11	METAL CHIP	18K	0.5%	1/10W
R5415	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R5416	1-216-295-91	SHORT	0		
R5419	1-216-049-91	RES-CHIP	1K	5%	1/10W
R5420	1-216-077-91	RES-CHIP	15K	5%	1/10W
R5421	1-216-081-00	RES-CHIP	22K	5%	1/10W
R5422	1-216-105-91	RES-CHIP	220K	5%	1/10W
R5501	1-247-807-31	CARBON	100	5%	1/4W
R5502	1-247-807-31	CARBON	100	5%	1/4W
R5503	1-247-807-31	CARBON	100	5%	1/4W
R5504	1-247-807-31	CARBON	100	5%	1/4W
R5505	1-247-807-31	CARBON	100	5%	1/4W
R5506	1-247-807-31	CARBON	100	5%	1/4W
R5507	1-247-843-11	CARBON	3.3K	5%	1/4W
R5508	1-247-843-11	CARBON	3.3K	5%	1/4W
R5509	1-247-843-11	CARBON	3.3K	5%	1/4W
R5510	1-247-843-11	CARBON	3.3K	5%	1/4W
R5511	1-249-417-11	CARBON	1K	5%	1/4W
R5512	1-249-417-11	CARBON	1K	5%	1/4W
R5513	1-247-843-11	CARBON	3.3K	5%	1/4W
R5515	1-247-843-11	CARBON	3.3K	5%	1/4W
R5517	1-249-417-11	CARBON	1K	5%	1/4W
R5518	1-249-417-11	CARBON	1K	5%	1/4W
R5519	1-249-429-11	CARBON	10K	5%	1/4W
R5520	1-249-429-11	CARBON	10K	5%	1/4W
R5521	1-214-808-11	METAL	4.7	1%	1/2W
R5522	1-214-808-11	METAL	4.7	1%	1/2W
R5523	1-247-807-31	CARBON	100	5%	1/4W
R5524	1-249-429-11	CARBON	10K	5%	1/4W
R5525	1-214-808-11	METAL	4.7	1%	1/2W
R5526	1-247-807-31	CARBON	100	5%	1/4W
R5527	1-214-808-11	METAL	4.7	1%	1/2W
R5528	1-249-429-11	CARBON	10K	5%	1/4W
R5529	1-214-808-11	METAL	4.7	1%	1/2W
R5530	1-214-808-11	METAL	4.7	1%	1/2W
R5531	1-249-417-11	CARBON	1K	5%	1/4W
R5532	1-249-417-11	CARBON	1K	5%	1/4W
R5533	1-214-808-11	METAL	4.7	1%	1/2W
R5534	1-214-808-11	METAL	4.7	1%	1/2W
R5535	1-214-808-11	METAL	4.7	1%	1/2W
R5536	1-214-808-11	METAL	4.7	1%	1/2W
R5537	1-214-808-11	METAL	4.7	1%	1/2W
R5538	1-214-808-11	METAL	4.7	1%	1/2W
R5541	1-214-808-11	METAL	4.7	1%	1/2W
R5542	1-214-808-11	METAL	4.7	1%	1/2W

D **G1, G**

• The components identified by ⊠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
R5545	1-214-808-11	METAL	4.7	1%	1/2W
R5546	1-214-808-11	METAL	4.7	1%	1/2W
R5547	1-214-808-11	METAL	4.7	1%	1/2W
R5548	1-214-808-11	METAL	4.7	1%	1/2W
R5551	1-214-808-11	METAL	4.7	1%	1/2W
R5552	1-214-808-11	METAL	4.7	1%	1/2W
R5553	1-214-808-11	METAL	4.7	1%	1/2W
R5554	1-214-808-11	METAL	4.7	1%	1/2W
R5555	1-214-808-11	METAL	4.7	1%	1/2W
R5556	1-214-808-11	METAL	4.7	1%	1/2W
R5557	1-214-808-11	METAL	4.7	1%	1/2W
R5558	1-214-808-11	METAL	4.7	1%	1/2W
R5559	1-214-808-11	METAL	4.7	1%	1/2W
R5560	1-214-808-11	METAL	4.7	1%	1/2W
R5561	1-214-808-11	METAL	4.7	1%	1/2W
R5562	1-214-808-11	METAL	4.7	1%	1/2W
R5563	1-249-429-11	CARBON	10K	5%	1/4W
R5564	1-249-429-11	CARBON	10K	5%	1/4W
R5565	1-249-429-11	CARBON	10K	5%	1/4W
R5566	1-249-429-11	CARBON	10K	5%	1/4W
R5567	1-249-429-11	CARBON	10K	5%	1/4W
R5568	1-249-429-11	CARBON	10K	5%	1/4W
R5569	1-249-429-11	CARBON	10K	5%	1/4W
R5570	1-249-429-11	CARBON	10K	5%	1/4W
R5723	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5724	1-247-807-31	CARBON	100	5%	1/4W
R5725	1-216-093-91	RES-CHIP	68K	5%	1/10W
R5726	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R5727	1-216-085-00	RES-CHIP	33K	5%	1/10W
R5728	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R5729	1-216-025-91	RES-CHIP	100	5%	1/10W
R5730	1-249-431-11	CARBON	15K	5%	1/4W
R5731	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5732	1-249-441-11	CARBON	100K	5%	1/4W
R5734	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R5735	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R5737	1-216-089-91	RES-CHIP	47K	5%	1/10W
R5738	1-249-405-11	CARBON	100	5%	1/4W
R5739	1-216-025-91	RES-CHIP	100	5%	1/10W
R5740	1-215-917-11	METAL OXIDE	1K	5%	3W
R5744	1-216-089-91	RES-CHIP	47K	5%	1/10W
R5745	1-216-099-00	RES-CHIP	120K	5%	1/10W
R5746	1-215-925-11	METAL OXIDE	22K	5%	3W
R5747	1-215-925-11	METAL OXIDE	22K	5%	3W
R5748	1-216-041-00	RES-CHIP	470	5%	1/10W
R5749	1-216-025-91	RES-CHIP	100	5%	1/10W
R5750	1-216-025-91	RES-CHIP	100	5%	1/10W
R5751	1-260-099-11	CARBON	1K	5%	1/2W
R5753	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R5754	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5755	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R5756	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R5757	1-219-752-11	CARBON	100K	5%	1/2W
R5758	1-215-925-11	METAL OXIDE	22K	5%	3W
R5759	1-215-925-11	METAL OXIDE	22K	5%	3W
R5762	1-219-743-11	CARBON	100	5%	1/2W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R5763	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R5768	1-249-429-11	CARBON	10K	5%	1/4W
R5769	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5770	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5771	1-216-097-91	RES-CHIP	100K	5%	1/10W
R5772	1-249-429-11	CARBON	10K	5%	1/4W
⊠R9901	⚠	METAL			1/4W

<SPARK GAP>

REF.NO.	PART NO.	DESCRIPTION
SG5702	1-519-466-11	GAP, SPARK

<TRANSFORMER>

REF.NO.	PART NO.	DESCRIPTION
T5101	1-437-209-11	TRANSFORMER, HORIZONTAL DRIVE
T5102	1-419-553-11	COIL,HORIZONTAL LINEARITY(HLC)
T5103	⚠1-453-335-11	TRANSFORMER ASSY, FLY BACK (NX-4010//M3P4)
T5104	1-435-439-11	TRANSFORMER, FERRITE (PMT)

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REF.NO.	PART NO.	DESCRIPTION
	* A-1316-514-A	G1 BOARD, COMPLETE (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
	* A-1316-528-A	G BOARD, COMPLETE (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)

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REF.NO.	PART NO.	DESCRIPTION
	* 1-533-725-11	HOLDER, FUSE (F6001)
	* 4-374-846-01	COVER, CAPACITOR, CAP TYPE (VD6001, VD6002)
	4-382-854-11	SCREW (M3X10), P, SW (+) (D6015 : G BOARD, D6301, D6302, D6304, D6308, D6309, IC6004)

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C6000	⚠1-104-708-51	MYLAR	0.47μF	20%	250V
C6001	1-163-251-11	CERAMIC CHIP	100pF	5%	50V (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6003	⚠1-104-706-51	MYLAR	0.22μF	20%	250V
C6006	1-126-961-11	ELECT	2.2μF	20%	50V (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6007	1-163-251-11	CERAMIC CHIP	100pF	5%	50V (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6008	1-163-251-11	CERAMIC CHIP	100pF	5%	50V (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6009	⚠1-104-706-51	MYLAR	0.22μF	20%	250V
C6010	⚠1-119-894-51	CERAMIC	2200pF	20%	250V
C6011	⚠1-119-894-51	CERAMIC	2200pF	20%	250V
C6013	⚠1-161-964-91	CERAMIC	0.0047μF		250V
C6014	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6015	⚠1-161-964-91	CERAMIC	0.0047μF		250V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF.NO.	PART NO.	DESCRIPTION	REMARK
C6016	1-163-251-11	CERAMIC CHIP 100pF 5% 50V	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6017	⚠1-161-964-51	CERAMIC 0.0047μF 250V	
C6018	⚠1-161-964-51	CERAMIC 0.0047μF 250V	
C6019	1-126-961-11	ELECT 2.2μF 20% 50V	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6020	1-126-968-11	ELECT 100μF 20% 50V	
C6022	1-109-834-11	ELECT(BLOCK) 1500μF 20% 250V	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6022	1-131-940-11	ELECT 1200μF 20% 250V	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
C6023	1-109-834-11	ELECT(BLOCK) 1500μF 20% 250V	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6023	1-131-940-11	ELECT 1200μF 20% 250V	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
C6024	1-117-227-11	MYLAR 1μF 10% 450V	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
C6025	1-115-389-11	FILM 0.018μF 3% 800V	
C6026	1-125-969-91	CERAMIC 680pF 10% 1KV	
C6027	1-115-824-11	ELECT 18μF 20% 50V	
C6028	1-104-588-11	FILM 0.0082μF 2.50% 1.25KV	
C6029	1-102-106-00	CERAMIC 100pF 10% 50V	
C6030	1-136-189-00	MYLAR 0.1μF 10% 250V	
C6031	1-125-969-91	CERAMIC 680pF 10% 1KV	
C6032	1-115-405-11	FILM 0.039μF 3% 1KV	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
C6033	1-126-963-11	ELECT 4.7μF 20% 50V	
C6034	1-130-029-00	FILM 8200pF 2% 50V	
C6035	1-104-665-11	ELECT 100μF 20% 25V	
C6036	1-107-906-11	ELECT 10μF 20% 50V	
C6037	1-137-150-11	MYLAR 0.01μF 5% 50V	
C6038	1-104-588-11	FILM 0.0082μF 2.50% 1.25KV	
C6039	1-115-389-11	FILM 0.018μF 3% 800V	
C6040	1-117-227-11	MYLAR 1μF 10% 450V	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
C6041	1-163-009-11	CERAMIC CHIP 0.001μF 10% 50V	
C6042	1-163-009-11	CERAMIC CHIP 0.001μF 10% 50V	
C6043	1-104-663-11	ELECT 33μF 20% 16V	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6044	1-117-703-11	CERAMIC 0.0047μF 99% 250V	
C6045	1-107-675-11	ELECT 1μF 20% 450V	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6046	1-107-675-11	ELECT 1μF 20% 450V	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6100	⚠1-161-964-51	CERAMIC 0.0047μF 250V	
C6101	1-107-680-11	ELECT 22μF 20% 450V	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6101	1-107-679-91	ELECT 10μF 20% 450V	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
C6102	⚠1-161-964-51	CERAMIC 0.0047μF 250V	
C6103	1-163-005-11	CERAMIC CHIP 470pF 10% 50V	
C6104	1-163-009-11	CERAMIC CHIP 0.001μF 10% 50V	
C6105	1-164-004-11	CERAMIC CHIP 0.1μF 10% 25V	
C6106	1-163-009-11	CERAMIC CHIP 0.001μF 10% 50V	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6106	1-163-275-11	CERAMIC CHIP 0.001μF 5% 50V	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
C6107	1-137-605-11	MYLAR 0.01μF 10% 250V	
C6108	⚠1-161-964-51	CERAMIC 0.0047μF 250V	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6109	1-104-665-11	ELECT 100μF 20% 25V	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6109	1-126-965-11	ELECT 22μF 20% 50V	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
C6110	1-163-009-11	CERAMIC CHIP 0.001μF 10% 50V	
C6111	⚠1-161-964-51	CERAMIC 0.0047μF 250V	
C6300	1-101-810-00	CERAMIC 100pF 5% 500V	
C6301	1-101-810-00	CERAMIC 100pF 5% 500V	
C6302	1-102-114-00	CERAMIC 470pF 10% 50V	
C6303	1-102-114-00	CERAMIC 470pF 10% 50V	
C6306	1-101-810-00	CERAMIC 100pF 5% 500V	
C6307	1-126-943-11	ELECT 2200μF 20% 25V	
C6308	1-126-937-11	ELECT 4700μF 20% 16V	
C6309	1-101-810-00	CERAMIC 100pF 5% 500V	
C6310	1-101-810-00	CERAMIC 100pF 5% 500V	
C6311	1-104-665-11	ELECT 100μF 20% 25V	
C6312	1-104-665-11	ELECT 100μF 20% 25V	
C6313	1-126-960-11	ELECT 1μF 20% 50V	
C6314	1-128-567-51	ELECT 1000μF 20% 100V	
C6315	1-128-567-51	ELECT 1000μF 20% 100V	
C6317	1-109-954-11	ELECT 0.47μF 20% 160V	
C6321	1-128-549-11	ELECT 3300μF 20% 35V	
C6322	1-128-549-11	ELECT 3300μF 20% 35V	
C6323	1-128-549-11	ELECT 3300μF 20% 35V	
C6324	1-128-549-11	ELECT 3300μF 20% 35V	
C6325	1-126-935-11	ELECT 470μF 20% 6.3V	
C6327	1-126-968-11	ELECT 100μF 20% 50V	
C6328	1-126-968-11	ELECT 100μF 20% 50V	
C6329	1-126-943-11	ELECT 2200μF 20% 25V	
C6330	1-126-943-11	ELECT 2200μF 20% 25V	
C6331	1-107-641-11	ELECT 220μF 20% 160V	
C6332	1-104-665-11	ELECT 100μF 20% 25V	
C6333	1-104-665-11	ELECT 100μF 20% 25V	
C6334	1-126-940-11	ELECT 330μF 20% 25V	
C6335	1-126-967-11	ELECT 47μF 20% 50V	
C6337	1-101-810-00	CERAMIC 100pF 5% 500V	
C6338	1-162-117-00	CERAMIC 100pF 10% 500V	
C6339	1-104-987-11	MYLAR 0.001μF 10% 200V	

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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REF.NO.	PART NO.	DESCRIPTION	REMARK
C6340	1-164-004-11	CERAMIC CHIP 0.1μF 10% 25V	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
C6341	1-137-150-11	MYLAR 0.01μF 5% 50V	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
C6342	1-136-165-00	MYLAR 0.1μF 5% 50V	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
	<CONNECTOR>		
CN6002	1-695-915-11	TAB (CONTACT)	
CN6004	* 1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
CN6004	* 1-580-843-11	PIN, CONNECTOR (POWER)	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
CN6006	* 1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
CN6007	* 1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
CN6011	* 1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6300	* 1-564-508-11	PLUG, CONNECTOR 5P	
CN6301	* 1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
CN6302	* 1-764-333-11	PLUG, CONNECTOR 10P	
CN6303	* 1-764-333-11	PLUG, CONNECTOR 10P	
CN6304	* 1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P	
CN6306	1-695-915-11	TAB (CONTACT)	
CN6307	1-695-915-11	TAB (CONTACT)	
CN6308	1-695-915-11	TAB (CONTACT)	
	<DIODE>		
D6000	8-719-052-90	DIODE D1NL40-TA2	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6001	8-719-052-90	DIODE D1NL40-TA2	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6002	8-719-988-61	DIODE 1SS355TE-17	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6003	8-719-158-49	DIODE RD12SB2	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6004	8-719-991-33	DIODE 1SS133T-77	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6005	8-719-988-61	DIODE 1SS355TE-17	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6006	8-719-988-61	DIODE 1SS355TE-17	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6007	8-719-988-61	DIODE 1SS355TE-17	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6008	8-719-991-33	DIODE 1SS133T-77	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6009	8-719-158-49	DIODE RD12SB2	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6010	8-719-988-61	DIODE 1SS355TE-17	
D6011	8-719-988-61	DIODE 1SS355TE-17	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6015	⚠8-719-022-99	DIODE D6SB60L	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6015	⚠8-719-510-53	DIODE D4SB60L	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
D6017	8-719-063-73	DIODE D1NL20U-TR	
D6019	8-719-510-02	DIODE D1NS4	
D6020	8-719-029-04	DIODE D5L60	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
D6021	8-719-921-88	DIODE MTZJ-13B	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6021	8-719-110-36	DIODE RD13ES-B2	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
D6022	8-719-979-64	DIODE UF4005PKG23	
D6023	8-719-979-64	DIODE UF4005PKG23	
D6024	8-719-988-61	DIODE 1SS355TE-17	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6025	8-719-988-61	DIODE 1SS355TE-17	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6100	⚠8-719-077-76	DIODE D2SB60A-F04	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6100	⚠8-719-068-00	DIODE ERC04-06SE	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
D6101	8-719-068-00	DIODE ERC04-06SE	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6101	8-719-947-69	DIODE MTZJ-T-72-18B	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
D6102	8-719-978-65	DIODE DTZ-TT11-15B	
D6103	8-719-988-61	DIODE 1SS355TE-17	
D6104	⚠8-719-068-00	DIODE ERC04-06SE	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
D6105	8-719-948-45	DIODE ERA22-08	
D6106	⚠8-719-068-00	DIODE ERC04-06SE	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
D6108	8-719-063-73	DIODE D1NL20U-TR	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
D6108	8-719-510-48	DIODE D1N20R	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
D6300	8-719-057-96	DIODE D10SC6M-4012	
D6301	8-719-510-12	DIODE D10SC4M	

REF.NO.	PART NO.	DESCRIPTION	REMARK
D6302	8-719-312-47	DIODE RBA-406B	
D6303	8-719-063-73	DIODE D1NL20U-TR	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
D6304	8-719-050-18	DIODE D4SBL20U	
D6305	8-719-988-61	DIODE 1SS355TE-17	
D6306	8-719-988-61	DIODE 1SS355TE-17	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
D6307	8-719-988-61	DIODE 1SS355TE-17	
D6308	8-719-988-31	DIODE D10SC6MR	
D6309	8-719-057-96	DIODE D10SC6M-4012	
D6310	8-719-052-91	DIODE D4SBS4-F	
D6311	8-719-988-61	DIODE 1SS355TE-17	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
D6312	8-719-988-61	DIODE 1SS355TE-17	
D6315	8-719-988-61	DIODE 1SS355TE-17	
D6316	8-719-988-61	DIODE 1SS355TE-17	
D6317	8-719-988-61	DIODE 1SS355TE-17	
D6318	8-719-921-88	DIODE MTZJ-13B	
D6319	8-719-976-96	DIODE DTZ4.7C	
D6320	8-719-976-96	DIODE DTZ4.7C	
D6323	8-719-032-12	DIODE D1NS6	
	<FUSE>		
F6001	⚠1-532-506-51	FUSE 6.3A/250V	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
F6001	⚠1-576-232-11	FUSE (H.B.C.) 5A/250V	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
	<FERRITBEAD>		
FB6002	1-412-911-11	FERRITE 0µH	
FB6101	⚠1-412-911-21	FERRITE 0µH	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
FB6103	⚠1-412-911-21	FERRITE 0µH	
FB6301	1-412-911-11	FERRITE 0µH	
FB6302	1-412-911-11	FERRITE 0µH	
FB6303	1-412-911-11	FERRITE 0µH	
FB6304	1-412-911-11	FERRITE 0µH	
FB6305	1-412-911-11	FERRITE 0µH	
FB6306	1-412-911-11	FERRITE 0µH	
FB6309	1-412-911-11	FERRITE 0µH	
FB6310	1-412-911-11	FERRITE 0µH	
	<IC>		
IC6000	8-759-198-31	IC µPC1093J-1-T	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
IC6001	8-759-133-90	IC µPC339C	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
IC6002	⚠8-749-924-35	PHOTO COUPLER ON3171-R	
IC6003	⚠8-749-924-35	PHOTO COUPLER ON3171-R	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
IC6004	8-749-016-66	IC MCR5152	
IC6005	⚠8-749-924-35	PHOTO COUPLER ON3171-R	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
IC6006	8-759-198-31	IC µPC1093J-1-T	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
IC6007	⚠8-749-924-35	PHOTO COUPLER ON3171-R	
IC6301	8-749-012-13	IC DM-58	
IC6302	8-759-663-29	IC MM1476AF(TP)	
IC6303	8-759-198-31	IC µPC1093J-1-T	
IC6304	8-759-908-15	IC TL431CLP	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
	<COIL>		
L6303	1-412-525-31	INDUCTOR 10µH	
L6304	1-406-659-11	INDUCTOR 10µH	
L6307	1-412-525-31	INDUCTOR 10µH	
L6308	1-412-525-31	INDUCTOR 10µH	
L6309	1-412-525-31	INDUCTOR 10µH	
L6310	1-412-525-31	INDUCTOR 10µH	
L6311	1-412-525-31	INDUCTOR 10µH	
L6314	1-412-524-11	INDUCTOR 8.2µH	
L6315	1-412-524-11	INDUCTOR 8.2µH	
	<IC LINK>		
PS6300	⚠1-801-549-21	PROTECTOR, MODULE (4.0A)	
PS6301	⚠1-801-549-21	PROTECTOR, MODULE (4.0A)	
PS6302	⚠1-801-549-21	PROTECTOR, MODULE (4.0A)	
PS6303	⚠1-801-549-21	PROTECTOR, MODULE (4.0A)	
PS6306	⚠1-801-550-21	PROTECTOR, MODULE (2.5A)	
PS6307	⚠1-801-550-21	PROTECTOR, MODULE (2.5A)	
PS6310	⚠1-801-550-21	PROTECTOR, MODULE (2.5A)	
PS6311	⚠1-801-550-21	PROTECTOR, MODULE (2.5A)	
	<TRANSISTOR>		
Q6000	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
Q6002	8-729-140-97	TRANSISTOR 2SB734-34	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
Q6003	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
Q6004	8-729-140-93	TRANSISTOR 2SB733-34	
Q6005	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
Q6100	8-729-046-40	TRANSISTOR 2SK2663	
Q6102	8-729-023-22	TRANSISTOR 2SD2114K	

G1, G

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q6300	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
Q6300	8-729-023-22	TRANSISTOR 2SD2114K	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
Q6301	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q6302	8-729-026-49	TRANSISTOR 2SA1037AK-T-146-R	
Q6303	8-729-820-82	TRANSISTOR 2SA1208	
Q6304	8-729-026-39	TRANSISTOR 2SA933AS-QT	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
	<RESISTOR>		
R6000	1-260-131-11	CARBON 470K 5% 1/2W	
R6001	1-260-131-11	CARBON 470K 5% 1/2W	
R6002	1-202-981-11	CEMENTED 0.82 5% 20W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6002	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
R6003	⚠1-219-759-91	CARBON 1M 5% 1/2W	
R6004	1-208-806-11	METAL CHIP 10K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6005	1-208-806-11	METAL CHIP 10K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6006	1-208-832-11	METAL CHIP 120K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6007	1-208-827-11	METAL CHIP 75K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6008	1-215-489-00	METAL 680K 1% 1/4W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6009	1-215-489-00	METAL 680K 1% 1/4W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6010	1-215-489-00	METAL 680K 1% 1/4W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6011	1-208-798-11	METAL CHIP 4.7K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6012	1-208-832-11	METAL CHIP 120K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6013	1-215-489-00	METAL 680K 1% 1/4W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6014	1-215-489-00	METAL 680K 1% 1/4W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6015	1-215-489-00	METAL 680K 1% 1/4W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6016	1-216-081-00	RES-CHIP 22K 5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6017	1-208-830-11	METAL CHIP 100K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6018	1-208-844-11	METAL CHIP 390K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6019	1-208-806-11	METAL CHIP 10K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6020	1-208-827-11	METAL CHIP 75K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6021	1-208-830-11	METAL CHIP 100K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6022	1-208-846-11	METAL CHIP 470K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6023	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6024	1-208-846-11	METAL CHIP 470K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6025	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6026	⚠1-218-265-21	METAL 8.2M 5% 1W	
R6027	1-249-389-11	CARBON 4.7 5% 1/4W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6029	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6030	1-216-089-91	RES-CHIP 47K 5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6031	1-216-073-00	RES-CHIP 10K 5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6033	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6035	⚠1-205-998-11	CEMENTED 1 5% 10W	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
R6036	1-208-830-11	METAL CHIP 100K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6038	1-216-073-00	RES-CHIP 10K 5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6041	1-208-822-11	METAL CHIP 47K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6042	1-208-822-11	METAL CHIP 47K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6043	1-216-073-00	RES-CHIP 10K 5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R6044	1-216-073-00	RES-CHIP	10K	5%	1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6045	1-208-819-11	METAL CHIP	36K	0.5%	1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6046	1-215-489-00	METAL	680K	1%	1/4W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6047	1-215-489-00	METAL	680K	1%	1/4W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6048	1-215-489-00	METAL	680K	1%	1/4W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6049	⚠1-205-998-11	CEMENTED	1	5%	10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
R6050	1-205-943-11	CEMENTED	1	5%	20W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6051	1-208-824-11	METAL CHIP	56K	0.5%	1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6052	1-249-417-11	CARBON	1K	5%	1/4W
R6053	1-208-792-11	METAL CHIP	2.7K	0.5%	1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6053	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
R6054	1-208-774-11	METAL CHIP	470	0.5%	1/10W
R6055	1-208-805-11	METAL CHIP	9.1K	0.5%	1/10W
R6056	1-217-625-00	METAL	0.05	10%	2W
R6057	1-215-477-00	METAL	220K	1%	1/4W
R6058	1-215-477-00	METAL	220K	1%	1/4W
R6059	1-215-477-00	METAL	220K	1%	1/4W
R6060	1-219-512-11	CARBON	2.2M	5%	1/2W
R6061	⚠1-220-886-61	FUSIBLE	0.1	10%	1W
R6062	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6062	1-208-796-11	METAL CHIP	3.9K	0.5%	1/10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
R6065	1-219-512-11	CARBON	2.2M	5%	1/2W
R6067	1-249-397-11	CARBON	22	5%	1/4W
R6068	⚠1-205-998-11	CEMENTED	1	5%	10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
R6069	⚠1-205-998-11	CEMENTED	1	5%	10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
R6071	⚠1-240-881-11	CEMENTED	0.82	5%	10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6072	1-249-417-11	CARBON	1K	5%	1/4W
R6076	1-249-389-11	CARBON	4.7	5%	1/4W
R6077	1-216-689-11	RES-CHIP	39K	5%	1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)

REF.NO.	PART NO.	DESCRIPTION			REMARK
R6078	1-216-073-00	RES-CHIP	10K	5%	1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6079	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6100	1-260-298-51	CARBON	3.3	5%	1/2W
R6101	1-216-045-00	RES-CHIP	680	5%	1/10W
R6102	1-249-389-11	CARBON	4.7	5%	1/4W
R6103	1-216-009-91	RES-CHIP	22	5%	1/10W
R6104	1-240-205-11	CARBON	22M	5%	1/2W
R6105	1-216-097-91	RES-CHIP	100K	5%	1/10W
R6106	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6107	1-216-089-91	RES-CHIP	47K	5%	1/10W
R6108	1-215-493-00	METAL	1M	1%	1/4W
R6109	1-216-025-91	RES-CHIP	100	5%	1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6109	1-216-041-00	RES-CHIP	470	5%	1/10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
R6300	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6301	1-249-413-11	CARBON	470	5%	1/4W
R6302	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6304	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6305	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6306	1-216-041-00	RES-CHIP	470	5%	1/10W
R6307	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6308	1-216-049-91	RES-CHIP	1K	5%	1/10W
R6309	1-249-417-11	CARBON	1K	5%	1/4W
R6310	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6311	1-215-477-00	METAL	220K	1%	1/4W
R6312	1-249-417-11	CARBON	1K	5%	1/4W
R6313	1-216-097-91	RES-CHIP	100K	5%	1/10W
R6314	1-216-385-11	METAL OXIDE	0.47	5%	3W
R6316	1-215-477-00	METAL	220K	1%	1/4W
R6317	1-249-417-11	CARBON	1K	5%	1/4W
R6318	1-215-453-00	METAL	22K	1%	1/4W
R6319	1-215-476-00	METAL	200K	1%	1/4W
R6320	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6321	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R6322	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6323	1-216-041-00	RES-CHIP	470	5%	1/10W
R6324	1-216-049-91	RES-CHIP	1K	5%	1/10W
R6325	1-208-819-11	METAL CHIP	36K	0.5%	1/10W
R6326	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R6327	1-208-782-11	METAL CHIP	1K	0.5%	1/10W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
R6328	1-216-065-91	RES-CHIP	4.7K	5%	1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6328	1-215-906-11	METAL OXIDE	15	5%	3W (ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
R6329	1-216-041-00	RES-CHIP	470	5%	1/10W (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

G1, G

REF.NO.	PART NO.	DESCRIPTION	REMARK
R6329	1-208-807-11	METAL CHIP 11K 0.5% 1/10W	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
R6330	1-208-813-11	METAL CHIP 20K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6332	1-208-819-11	METAL CHIP 36K 0.5% 1/10W	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
R6333	1-208-806-11	METAL CHIP 10K 0.5% 1/10W	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
R6334	1-216-041-00	RES-CHIP 470 5% 1/10W	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
R6335	1-216-071-00	RES-CHIP 8.2K 5% 1/10W	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
R6336	1-208-802-11	METAL CHIP 6.8K 0.5% 1/10W	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
	<RELAY>		
RY6000	⚠1-755-357-11	RELAY, AC POWER	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
RY6000	⚠1-755-352-11	RELAY, AC POWER	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
RY6001	⚠1-755-357-11	RELAY, AC POWER	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
	<TRANSFORMER>		
T6001	⚠1-431-493-11	TRANSFORMER, LINE FILTER	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
T6001	⚠1-424-505-11	TRANSFORMER, LINE FILTER	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
T6002	⚠1-431-493-11	TRANSFORMER, LINE FILTER	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
T6002	⚠1-424-505-11	TRANSFORMER, LINE FILTER	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
T6003	⚠1-431-445-11	TRANSFORMER, CONVERTER (PFT)	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)
T6004	⚠1-435-443-11	TRANSFORMER, CONVERTER (PIT)	
T6005	⚠1-435-445-11	TRANSFORMER, CONVERTER (PIT)	
T6100	⚠1-435-444-11	TRANSFORMER, STAND-BY	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
T6100	⚠1-433-844-11	TRANSFORMER, CONVERTER	(ES43HK1/SN1, ES48HK1/SN1, ES53HK1/SN1, ES61HK1/SN1)

REF.NO.	PART NO.	DESCRIPTION	REMARK
	<THERMISTOR>		
TH6100	1-803-586-11	THERMISTOR, NTC	
	<VARISTOR>		
VD6000	1-803-614-11	VARISTOR	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
VD6001	⚠1-803-830-51	VARISTOR (ERZV14D621)	
VD6002	⚠1-803-830-51	VARISTOR (ERZV14D621)	

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MISCELLANEOUS
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REF.NO.	PART NO.	DESCRIPTION	REMARK
	⚠1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE)	(FOCUS PACK)
	⚠1-452-790-41	NECK ASSY (NA-295)	
	1-528-864-11	BATTERY, SOLAR	
	1-529-403-11	SPEAKER (6.6 CM) (ES48, ES53)	
	1-529-405-11	SPEAKER (13 CM) (ES53)	
	1-529-643-11	SPEAKER (13 CM) (ES48)	
	1-529-757-11	SPEAKER (2.7 CM) (ES61)	
	1-529-758-11	SPEAKER (8 CM) (ES61)	
	1-529-759-11	SPEAKER (16 CM) (ES61)	
	1-529-791-11	SPEAKER (10 CM) (ES43)	
	1-529-792-11	SPEAKER (12 CM) (ES43)	
	1-543-982-11	CORE, FERRITE	
	⚠1-574-062-52	CORD, POWER (WITH CONNECTOR)	(ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)
	* 1-761-348-11	PWB, MOUNTED (NET WORK) (ES43)	
	1-790-082-11	CABLE, RF	
	⚠1-792-002-11	CORD, POWER (WITH FILTER)	(ES43HK1, ES48HK1, ES53HK1, ES61HK1)
	⚠1-792-035-11	CORD, POWER (WITH FILTER)	(ES43SN1, ES48SN1, ES53SN1, ES61SN1)
	⚠8-598-955-12	BLOCK ASSY, HIGH-VOLTAGE	
	⚠8-733-570-15	PICTURE TUBE 07MXC2 (G) (HEATER)	
	⚠8-733-571-15	PICTURE TUBE 07MXC2 (R) (HEATER)	(ES43)
	⚠8-733-572-15	PICTURE TUBE 07MXC3 (R) (HEATER)	(ES48, ES53)
	⚠8-733-573-15	PICTURE TUBE 07MXC4 (R) (HEATER)	(ES61)
	⚠8-733-574-15	PICTURE TUBE 07MAC2 (B) (HEATER)	(ES43)
	⚠8-733-575-15	PICTURE TUBE 07MAC3 (B) (HEATER)	(ES48, ES53)
	⚠8-733-576-15	PICTURE TUBE 07MAC4 (B) (HEATER)	(ES61)

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The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
	ACCESSORIES AND PACKING MATERIALS **		
	⚠1-569-008-11	ADAPTOR, CONVERSION 2P (ES43ME1/MN1, ES48ME1/MN1, ES53ME1/MN1, ES61ME1/MN1)	
	* 4-029-168-01	BAG, PROTECTION (ES43)	
	* 4-030-895-01	JOINT	
	* 4-041-423-11	SHEET, PROTECTION (ES43, ES48)	
	* 4-055-672-01	BAG, PROTECTION (ES53)	
	* 4-055-673-01	SHEET, PROTECTION (ES53,ES61)	
	* 4-059-461-01	BAG, PROTECTION (ES61)	
	* 4-060-976-01	BAG, PROTECTION (ES48)	
	* 4-069-899-01	TRAY(ES48)	
	* 4-069-900-02	BOARD, TOP (ES48)	
	* 4-069-901-01	BOARD, BOTTOM (ES48)	
	* 4-069-994-01	TRAY(ES53)	
	* 4-069-995-01	BOARD, TOP (ES53)	
	* 4-069-996-01	BOARD, BOTTOM (ES53)	
	* 4-071-930-01	TRAY(ES61)	
	* 4-071-931-01	BOARD, TOP (ES61)	
	* 4-071-932-01	BOARD, BOTTOM (ES61)	
	* 4-071-933-01	CUSHION (UPPER) (ASSY) (ES61)	
	* 4-071-934-01	CUSHION (LOWER) (ASSY) (ES61)	
	* 4-076-536-01	TRAY(ES43)	
	* 4-076-537-01	INDIVIDUAL CARTON (ES43)	
	* 4-076-538-01	CUSHION (UPPER) (ASSY) (ES43)	
	* 4-076-539-01	CUSHION (LOWER) (ASSY) (ES43)	
	4-076-694-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, CHINESE, PERUSSIAN, ARABIC)	
	* 4-076-803-01	INDIVIDUAL CARTON (ES48)	
	* 4-076-804-01	CUSHION (UPPER) (ASSY) (ES48)	
	* 4-076-805-01	CUSHION (LOWER) (ASSY) (ES48)	
	* 4-077-770-01	INDIVIDUAL CARTON (ES53)	
	* 4-077-771-01	CUSHION (UPPER) (ASSY) (ES53)	
	* 4-077-772-01	CUSHION (LOWER) (ASSY) (ES53)	
	* 4-077-862-01	INDIVIDUAL CARTON (ES61)	
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		REMOTE COMMANDER ******************************	
	1-476-170-11	REMOTE COMMANDER (RM-961)	
	4-978-977-01	COVER, BATTERY (for RM-961)	